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Singapore: an energy power without oil fields

Singapore: an energy power without oil fields?

Abstract:

Singapore has turned the absence of domestic energy resources and its high geographic vulnerability into the foundation of a distinctive energy model. This paper examines its historical evolution from a free port into a hub for refining, storage, bunkering, trading and financial services; assesses the role of the Strait of Malacca in Asian energy security and the regional responses to its risks; and analyses supply diversification through liquefied natural gas, electricity interconnections, ASEAN agreements and new infrastructure. Singapore demonstrates how state planning, maritime and financial connectivity, and regional integration can offset a lack of natural resources, while the country remains structurally dependent on the stability of maritime routes and the international economic order.

Keywords:

Singapore, energy security, Strait of Malacca, ASEAN, energy hub.

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Singapore: from commercial port to energy hub of the Asian continent

Singapore did not establish itself as an energy player through the conventional route of natural resource endowment. On an island of barely 700 km² and with a population of 3.66 million, there are no hydrocarbon reserves; its significance stems, instead, from its ability to transform an exceptional maritime position into a platform for the trade, refining, storage and redistribution of hydrocarbons and other energy products.

The historical context helps to explain part of the political and economic philosophy that has guided its leaders and accounts for the distinctly commercial nature of Singaporean society to this day.

On 29 January 1819, Sir Stamford Raffles, acting on behalf of the *British East India Company*, chose Singapore for its natural harbour, the availability of fresh water (a scarce resource on other islands in the region) and its position at the southern end of the Strait of Malacca¹.

Raffles envisaged Singapore as a free port, open to ships of all nationalities, in contrast to the Dutch monopolistic system in force across the rest of the archipelago. The British presence led to tensions with the Netherlands, which claimed sovereignty over the archipelago. However, the Treaty of London of 1824 divided the region into spheres of influence: the Dutch recognised British control over Singapore and Malacca, whilst the British ceded their possessions in Sumatra².

The enclave also played a strategic role during the Opium Wars (1839–1842 and 1856–1860), serving as a distribution point for the drug on its way to China. This trade came to account for between 40 and 60 per cent of the *Straits Settlements*' colonial revenue³.

¹ NATIONAL LIBRARY BOARD OF SINGAPORE. 'Founding of Singapore', *NLB*. Singapore. Available at: <https://www.nlb.gov.sg/main/article-detail?cmsuuid=ad81b9fa-1a01-47a9-a5ba-d50be96a6ff0> (accessed 31 July 2026).

² NATIONAL LIBRARY BOARD OF SINGAPORE. 'Signing of the Anglo-Dutch Treaty (Treaty of London) of 1824', *NLB*. Singapore, 25 February 2014. Available at: <https://www.nlb.gov.sg/main/article-detail?cmsuuid=5005d886-9c27-421e-a22d-44fb5965350c> (accessed 31 July 2026).

³ NATIONAL LIBRARY BOARD OF SINGAPORE. 'Chasing the Dragon: The Scourge of Opium', *BiblioAsia*, vol. 11, no. 3. October–December 2015. Available at: <https://biblioasia.nlb.gov.sg/all-sections/vol-11-issue-3-oct-dec-2015-scourge-of-opium/> (accessed 31 July 2026).

Attracted by economic opportunities and driven by the harsh living conditions in southern China, thousands of immigrants, mainly from the southern provinces of Fujian and Guangdong, settled on the island. Many were disparagingly referred to as 'coolies', workers hired through the 'indentured labour' system, whereby the employer paid for their passage from China in exchange for twelve months' work. These workers were employed in construction, on the docks, on plantations and in river transport⁴.

By 1836, the Chinese population had already overtaken the original Malay community as the island's largest ethnic group. Today, people of Chinese descent make up approximately three-quarters of the population.

The colony's strategic location enabled the British Empire to link the main sea routes between Europe, British India, China and South-East Asia. The monsoon winds, historically utilised by merchant vessels, facilitated transit through the strait, whilst the natural features of the enclave provided a safe harbour for ships to anchor and take on supplies.

The strategic importance of the port increased even further following the opening of the Suez Canal in 1869.

However, many of the characteristics that currently define Singapore's economic and energy model originated in the early years following independence in 1965. The need to ensure the economic viability and survival of the new, secular state, situated in a predominantly Muslim regional environment, favoured a markedly pragmatic, ' ' approach geared towards long-term planning, economic openness and the attraction of foreign investment.

Over time, this approach became one of its main competitive advantages over many neighbouring countries.

⁴ NATIONAL LIBRARY BOARD OF SINGAPORE. 'Chinese coolies', *NLB, Singapore*. 17 January 2018. Available at: <https://www.nlb.gov.sg/main/article-detail?cmsuuiid=1934198c-b5bf-4980-abc7-0aeb29ed39c9> (accessed 31 July 2026).

The instrument that spearheaded this transformation was the *Economic Development Board* (EDB), established in 1961 with an initial capital of 100 million Singapore dollars⁵.

The legislative framework proved equally decisive. The *Economic Expansion Incentives Act* of 1967 established a system of incentives, primarily fiscal, aimed at attracting high value-added foreign investment⁶.

These included the *Pioneer Certificate*, which exempted pioneer companies in sectors that were not yet established or were underdeveloped in the country from income tax for a period of up to fifteen years⁷.

Shell was the first oil company to benefit from this tax scheme⁸.

The opening of Shell's first refinery on Pulau Bukom marked a turning point, demonstrating that Singapore could attract large-scale refining facilities despite having no oil fields or domestic crude oil production of its own.

In the decades that followed, the development of Pulau Bukom, Pulau Ayer Chawan and Jurong Island consolidated an integrated energy and petrochemical complex, capable of combining storage, refining, bunkering, *the blending* of refined products and their re-export, mainly to the rest of the continent. Singapore thus became one of the world's leading energy hubs, despite lacking oil and gas reserves.

Today, this model remains in place, although it operates under different conditions. Singapore is evolving from an energy hub based on fossil fuels towards one that aims to reconcile its traditional logistical centrality with the transition to a more diversified and lower-carbon system.

⁵ NATIONAL LIBRARY BOARD OF SINGAPORE. 'Economic Development Board', *NLB*. Singapore, 31 August 1999. Available at: <https://www.nlb.gov.sg/main/article-detail?cmsuuiid=1ea4456f-dac4-4f57-9f9d-35d24af35807> (accessed 31 July 2026).

⁶ SINGAPORE STATUTES ONLINE. *Expansion Incentives (Relief from Income Tax) Act 1967*, sections 6 and 13. Attorney-General's Chambers, Singapore, 15 December 1967. Available at: <https://sso.agc.gov.sg/Act/EEIRITA1967> (accessed 31 July 2026).

⁷ MINISTRY OF TRADE AND INDUSTRY. 'Written reply to PQ on Pioneer Certificate Incentive', *MTI*. Singapore. Available at: <https://www.mti.gov.sg/newsroom/written-reply-to-pq-on-pioneer-certificate-incentive/> (accessed 31 July 2026).

⁸ NATIONAL LIBRARY BOARD OF SINGAPORE. 'Shell opens Singapore's first oil refinery at Pulau Bukom', *NLB*. Singapore, 28 September 2011. Available at: <https://www.nlb.gov.sg/main/article-detail?cmsuuiid=37c6a7dd-c7de-4378-819e-e2407839f8d5> (accessed 31 July 2026).

This does not mean abandoning its historical role, but rather adapting it through investment in infrastructure, regional interconnections within and outside ASEAN, and new technological capabilities.

These historical circumstances explain why security of supply, international connectivity and regional stability continue to occupy a central place in Singapore's economic and energy model.

Singapore's energy ecosystem

Singapore's consolidation as a financial and commercial hub is not due to the availability of natural resources – which, as we have seen, are non-existent – but rather to the state's ability to create an environment characterised by a high degree of institutional predictability, regulatory sophistication and connectivity with Asia's main flows of capital and goods.

This model of international integration – based on openness, stable relations with its neighbours, legal certainty and the integration of maritime logistics, financial intermediation and high value-added services – enabled Singapore to evolve from a mere transit port into a hub where banking, asset management, trade finance, insurance, reinsurance and commodities markets.

Its port capacities illustrate the scale of this model. The Port of Singapore closed 2025 with a record 44.66 million containers (TEU), up 8.6 per cent on the previous year, whilst maritime traffic reached 3,220 million tonnes of gross tonnage.

Sales of marine fuel (*bunkering*) – a sector in which Singapore ranks first globally by volume – also reached an all-time high of 56.77 million tonnes⁹.

By way of comparison, the port of Algeciras handles an annual volume of approximately 3 to 3.5 million tonnes of marine fuel and LNG. These figures highlight the difference

⁹ MARITIME AND PORT AUTHORITY OF SINGAPORE. 'Singapore Retains Position as World's Leading Maritime Centre for 13th Consecutive Year', MPA. Singapore, 10 July 2026. Available at: <https://www.mpa.gov.sg/media-centre/details/singapore-retains-position-as-worlds-leading-maritime-centre-for-13th-consecutive-year> (accessed 31 July 2026).

between a global logistics hub and a port with a regional reach, and underline Singapore's importance as a hub situated next to the Strait of Malacca.

In the port sector, the development of the Tuas mega-port is also noteworthy, as it will bring together all the country's container terminals into a single facility. When fully operational, it will have 66 berths spread over 26 kilometres and a capacity of 65 million TEUs, almost double the current traffic volume. Planning for this project began several decades ago, reflecting the long-term vision that characterises the Singaporean government¹⁰.

Meanwhile, air connectivity complements the maritime dimension. Changi Airport, one of the world's leading international airports, handled nearly 70 million passengers in 2025, with around 100 airlines connecting Singapore to some 170 cities in around 50 countries. Terminal 5, scheduled for the mid-2030s, will substantially expand the airport's size and increase its capacity from 90 to 140 million passengers a year.

Changi is not merely a transit point for tourists or business travellers: it forms part of a comprehensive logistics hub where goods and people converge.

The commitment to the aviation *hub* follows the same logic as the Tuas mega-port: to maintain Singapore's relevance to Asia-Pacific trade flows against a backdrop of growing competition between regional hubs.

In the field of air freight, the expansion of the *Changi Airfreight Centre* and the creation of the *Changi East Innovation Zone* will increase annual handling capacity from 3 to 5.4 million tonnes and strengthen Singapore's position against other *hubs* such as Hong Kong and Shanghai.

Another key component of this ecosystem is the financial sector. The *Monetary Authority of Singapore* (MAS) presents it as an essential element of the national economy and its

¹⁰ MARITIME AND PORT AUTHORITY OF SINGAPORE. 'Port of the Future', *MPA*. Singapore. Available at: <https://www.mpa.gov.sg/maritime-singapore/port-of-the-future> (accessed 28 July 2026).

¹¹ LOI, Esther and FOO, Gavin. 'The pulse of Changi: How one of the world's busiest airports keeps *moving*', *The Straits Times*. Singapore, 1 July 2026. Available at: <https://www.straitstimes.com/multimedia/photos/changi-airport-singapore> (accessed 31 July 2026).

international standing, with an explicit role in linking capital, innovation and the real economy¹².

According to data recently published by the MAS, the financial sector grew by 4.3 per cent in 2025 and accounted for around 14 per cent of Singapore's GDP. Meanwhile, *assets under management* reached 6.7 trillion dollars by the end of 2025, and the country remained among the world's leading centres for foreign exchange trading. This financial density strengthens its economic autonomy and enhances its ability to attract investment and play a role in setting regional and international standards.

The *Singapore Exchange* (SGX) also operates as a leading regional stock exchange. Its high trading volume in financial derivatives, particularly in commodities — iron ore, rubber and petrochemicals — as well as in *hedging* instruments linked to both commodities and sea freight rates, enables producers, buyers, *traders*, shipping companies and other participants in the energy and maritime markets to manage risk and price volatility on a single platform—a capability not found elsewhere in the region.

The figures underpin this leadership: in 2024, Singapore channelled US\$1.9 trillion in international trade in all types of commodities, 40 per cent more than a decade earlier.

Around 400 international companies operate in the country, including all the world's major oil companies, such as Shell, Exxon, Saudi Aramco, PetroChina, etc.

Furthermore, since major international agencies specialising in the valuation and setting of reference prices for commodities and derivatives, such as Platts and Argus, established themselves in the country, Singapore has consolidated its position as the leading price-setting centre for petroleum products east of the Suez Canal¹³.

To attract and retain this activity, the Government maintains specific tax incentives, some of which have inspired other global competitors, such as Dubai. These include the *Global Trader Programme*, which applies reduced tax rates to certain international trading

¹² MONETARY AUTHORITY OF SINGAPORE. 'Singapore as a Trusted Connector in a Changing World', MAS. Singapore, 2026. Available at: <https://www.mas.gov.sg/news/speeches/2026/singapore-as-a-trusted-connector-in-a-changing-world> (accessed 31 July 2026).

¹³ ENTERPRISE SINGAPORE. 'From rubber roots to risk management: Singapore's 60-year mastery of global trades', *Enterprise Singapore*. 9 August 2025. Available at: <https://www.enterprisesg.gov.sg/resources/media-centre/news/2025/august/from-rubber-roots-to-risk-management-singapores-60-year-mastery-of-global-trades> (accessed 31 July 2026).

companies established in Singapore, and the *Finance & Treasury Centre Incentive*, aimed at corporate treasury centres and accompanied by exemptions on certain interest payments to foreign lenders¹⁴.

Taken together, these policies and initiatives form part of a deliberate strategy: to consolidate Singapore's position as a neutral and legally secure alternative to Hong Kong, Tokyo or Shanghai, attractive to both Western and Asian capital.

In a global environment characterised by jurisdictional fragmentation and pressure on traditional financial centres, the city-state has positioned itself as a hub for the convergence of goods, people and capital.

The MAS's prudential regulation, which brings together the supervision of banking, insurance and capital markets under a single authority, provides a stability that international institutions value as a strategic asset.

Tuas and Changi Terminal 5 are not isolated projects, but the physical manifestation of a model that integrates infrastructure, markets and incentives into a unique ecosystem in the Asia-Pacific region.

The Strait of Malacca and its role in the continent's energy security

The Strait of Malacca, some 900 kilometres long, is one of the main bottlenecks in global trade and, as such, a key element of Asia's energy security. Its narrowest point is in the *Phillips Channel*, off the coast of Singapore, and measures approximately 2.7 kilometres. Around 22 per cent of global maritime trade and an average of 23 million barrels of oil per day pass through this corridor, which connects the Indian Ocean with the South China Sea¹⁵. By way of comparison, some 21 million barrels per day pass through the Strait of Hormuz¹⁶.

¹⁴ SINGAPORE ECONOMIC DEVELOPMENT BOARD. 'Finance & Treasury Centre Incentive', *EDB*. Singapore. Available at: <https://www.edb.gov.sg/content/dam/edb-en/how-we-help/incentive-and-schemes/factsheets/FTC%20Factsheet.pdf> (accessed 31 July 2026).

¹⁵ REUTERS. 'Hormuz crisis throws spotlight on world's largest "chokepoint", the Strait of Malacca', *Reuters*. 23 April 2026. Available at: <https://www.reuters.com/world/asia-pacific/hormuz-crisis-throws-spotlight-worlds-largest-chokepoint-malacca-strait-2026-04-23/> (accessed 31 July 2026).

¹⁶ U.S. ENERGY INFORMATION ADMINISTRATION. 'World Oil Transit Chokepoints', *EIA*. 2025. Available at: https://www.eia.gov/international/analysis/special-topics/world_oil_transit_chokepoints (accessed 31 July 2026).

Approximately 60 per cent of the crude oil passing through the Strait of Malacca comes from the Persian Gulf and, of that volume, 48 per cent is destined for China. The concentration of sources (producing countries) and destinations (countries with refining capacity) amongst a small number of players amplifies the risk: a disruption to transit through the strait would not affect all economies equally, but would disproportionately affect those most dependent on maritime transport. Singapore is particularly dependent on the continuity of these flows to sustain its trade, port and energy models.

Table 1. Volume of crude oil and petroleum liquids transported through world chokepoints and the Cape of Good Hope, 2020–1H25

million barrels per day

Location	2020	2021	2022	2023	2024	1H25
Strait of Malacca	22.8	22.1	23.0	24.0	22.5	23.2
Strait of Hormuz	19.2	19.7	21.9	21.8	20.7	20.9
Suez Canal and SUMED Pipeline	5.4	5.2	7.3	8.8	4.8	4.9
Bab el-Mandeb	5.7	6.0	8.0	9.3	4.1	4.2
Danish Straits ^a	3.1	3.1	4.2	5.0	4.9	4.9
Turkish Straits (Dardanelles)	3.2	3.3	3.2	3.5	3.6	3.7
Panama Canal ^b	1.7	1.8	2.2	2.2	2.0	2.3
Cape of Good Hope	7.9	7.2	6.1	6.2	9.3	9.1
World maritime oil trade	74.1	75.9	78.6	80.2	79.7	79.8
World total oil supply	94.1	95.8	100.6	102.6	103.3	104.4

Data source: U.S. Energy Information Administration (EIA), *Short-Term Energy Outlook*, February 2026, and EIA analysis based on Vortexa tanker tracking and Panama Canal Authority data, using EIA conversion factors and calculations

Figure 1. Volumes of crude oil and petroleum products passing through the world's main maritime traffic chokepoints. Source: US Energy Information Administration (EIA).

The strategic importance of the strait has increased due to intensified geopolitical competition and the greater vulnerability of global energy supply chains, which has become apparent in the wake of the COVID-19 pandemic and the recent crises in the Strait of Hormuz.

Reuters, for example, recently noted that the Strait of Malacca is the world's largest bottleneck for oil transit, with a higher volume than the Strait of Hormuz, and that more than 100,000 vessels passed through the area in 2025.

The transit of oil and gas is crucial for the economies of China, Japan and South Korea, not to mention the rest of the Asian countries.

In this context, Singapore acts as one of the main guarantors of security, maritime information and logistical services linked to the strait, as well as being one of the greatest beneficiaries of the regional maritime order.

A major disruption would have immediate effects on logistics costs, security of supply and economic stability in Asia.

Security in the Strait is underpinned by sustained regional cooperation between Indonesia, Malaysia, Singapore and Thailand.

The most visible mechanism is the *Malacca Straits Patrol*, established in 2004 to strengthen surveillance, counter-piracy efforts, operational coordination and information sharing in the Straits of Malacca and Singapore.

It operates through Coordinated Maritime Patrols (MSSP), the joint '*Eyes in the Sky*' aerial patrols and the Intelligence Exchange Group (IEG), which utilises a real-time information system managed from the *Information Fusion Centre* in Singapore. This centre is staffed by liaison officers from 24 countries stationed at the Changi naval base, located near the airport of the same name.

Complementing this mechanism is bilateral cooperation between Singapore and Indonesia on maritime security, traffic control and the improvement of navigation. Governance of the strait is therefore based less on a central authority than on a network of pragmatic agreements aimed at keeping the route open.

India, for its part, is not a member of the *Malacca Straits Patrol*, although it also has specific bilateral cooperation agreements in place. In 2017, an agreement was formalised between the navies of India and Singapore, and in 2018, another was signed between India and Indonesia covering the Andaman-Nicobar-Sabang corridor. Both agreements strengthen surveillance and naval cooperation regarding traffic entering and leaving the strait.

India also possesses the Andaman and Nicobar Islands, situated less than 90 nautical miles from the western entrance to the Strait of Malacca and in a prime position to monitor access from the Indian Ocean.

New Delhi has strengthened this archipelago as a forward surveillance platform and intends to develop major port infrastructure on Great Nicobar. The project, with an estimated cost of 720,000 million rupees (approximately 7,600 million dollars), includes a transshipment port at Galathea Bay with an initial capacity of 6 million containers, an international airport, a power station and a submarine fibre-optic cable from Chennai t¹⁷.

China, the other major stakeholder with an interest in the stability of the strait, also perceives its security as a strategic vulnerability.

As early as 2003, the then President Hu Jintao popularised the term 'Malacca dilemma' to describe China's heavy reliance on this waterway, through which approximately 75 per cent of the crude oil that China imports by sea and nearly 60 per cent of the value of its maritime trade passes¹⁸.

Beijing has since sought to reduce this vulnerability through alternative measures, such as the Kyaukpyu–Yunnan oil pipeline, which has been operational since 2017, although this accounts for barely 5–6 per cent of China's oil imports.

The fact that the Strait of Malacca is virtually irreplaceable is also evident in the obstacles to developing these potential alternative routes.

For example, Thailand has been studying for years a land bridge of around 100 kilometres between Ranong, on the Andaman Sea, and Chumphon, on the Gulf of Thailand. The project envisages two deep-water ports and rail and road links between them.

The project, valued at around 38,000 million dollars, aims to divert some of the traffic away from the strait, but appears to have been postponed recently due, on the one hand, to doubts about its profitability and, on the other, to funding difficulties¹⁹.

Although the Thai land bridge and the development of Great Nicobar could partially alter maritime flows, neither would be in a position, on its own and in the short term, to match

¹⁷ BHARATSHAKTI. 'Great Nicobar: India's Gateway to the Indo-Pacific, Not Just Another Island Project', *BharatShakti.in*. 2026. Available at: <https://bharatshakti.in/great-nicobar-indias-gateway-to-indo-pacific-not-just-another-island-project-says-former-navy-chief/> (accessed 31 July 2026).

¹⁸ BBC MUNDO. 'The Malacca Dilemma: why China is so concerned about this strait', *BBC*. 2026. Available at: <https://www.bbc.com/mundo/articles/ckgxp3d80j1o> (accessed 31 July 2026).

¹⁹ THE STRAITS TIMES. 'Thailand to scrap \$38.3b land bridge project after study'. Singapore, July 2026. Available at: <https://www.straitstimes.com/asia/se-asia/thailand-to-scrap-38-3b-land-bridge-project-after-study> (accessed 29 July 2026).

the levels of port connectivity, financial and logistical services, or legal certainty offered by Singapore.



Figure 2. The Strait of Malacca and the possible alternative Thai route. Source: Eurasiareview.com

Regional integration and the evolution of Singapore's energy model

The geopolitical tensions in the Middle East during 2026 have once again highlighted Asia's high dependence on international energy trade and the vulnerability of its main maritime corridors.

Although South-East Asia has been able to cushion the initial effects of the disruptions in the Strait of Hormuz by diversifying its suppliers and utilising alternative trade mechanisms, the region remains particularly vulnerable to potential disruptions to international supply.

Dependence on imported oil and liquefied natural gas, coupled with the growth in demand resulting from regional economic development, has reinforced the importance of the cooperation mechanisms promoted by ASEAN over recent decades. Energy security forms part of a broader agenda of connectivity, maritime cooperation and regional economic integration.

In this context, Singapore's energy security cannot be understood solely from a national perspective. The lack of domestic energy resources has led the country to progressively diversify its supply sources and to integrate itself into the main regional initiatives on energy, trade and connectivity.

Water, natural gas, electricity and maritime trade form part of a system of interdependencies developed with neighbouring countries and regional institutions in South-East Asia. Singapore has not eliminated its structural vulnerabilities, but has managed to reduce and manage them through integration mechanisms that reinforce its position as one of Asia's leading energy hubs.

The renewal of the *ASEAN Petroleum Security Agreement* (APSA) is one of the most significant examples of this trend. The agreement establishes a regional framework for coordinating member states' response to energy emergencies.

When a country experiences a shortage of crude oil and petroleum products exceeding 10 per cent of its domestic demand, it may activate the mechanism and request supplies from the other members.

The APSA is complemented by other initiatives currently under development, such as the *ASEAN Power Grid* and regional gas cooperation projects. In the renewal agreed in October 2025, the framework was expanded to include natural gas; to date, the mechanism has not had to be activated²⁰.

Regional integration has also begun to take shape through electricity interconnections. The *Laos-Thailand-Malaysia-Singapore Power Integration Project* (LTMS-PIP) is the first operational multilateral initiative within the *ASEAN Power Grid* and enables hydroelectricity to be imported from Laos via the Thai and Malaysian grids.

²⁰ ASEAN CENTRE FOR ENERGY. 'Natural Gas in the New ASEAN Petroleum Security Framework', *Policy Brief*, No. 3. ACE, Jakarta, 2026. Available at: https://storage.googleapis.com/aceweb-bucket-261225/pdf/publication/%5BPB%20No.%203%5D%20Policy%20Brief_Natural%20Gas%20in%20the%20New%20ASEAN%20Petroleum%20Security%20Framework_UAKlj4GR4oejdAD2zzT3qUdua2vHG4KflvuugdE.pdf (accessed 31 July 2026).

At the same time, Singapore has conditionally approved several projects to import, by 2035, around six gigawatts of low-carbon electricity from Indonesia, Vietnam, Cambodia and Australia²¹.

These initiatives aim to reduce dependence on a limited number of suppliers and increase the flexibility of the national electricity system.

A similar trend can be observed in the gas sector. Singapore began by importing natural gas via pipeline from Malaysia and Indonesia, which historically accounted for a significant part of its energy security.

The commissioning of the Jurong Island liquefied natural gas (LNG) terminal in 2013 enabled the country to bring in international suppliers, including Australia, Qatar and the United States, and to reduce its reliance on a limited number of regional suppliers.

This strategy continues through the expansion of national LNG import capacities and regional initiatives building on *the Trans-ASEAN Gas Pipeline*, which began in 1991 with the connection between Singapore and Malaysia and was subsequently extended to Indonesia. These initiatives are now part of the *ASEAN Oil and Gas Connectivity, Security and Sustainability* programme.

To bolster supply beyond existing contracts, Singapore established GasCo in 2025, a state-owned LNG buyer that began centralising procurement in January 2026.

Qatar supplies almost half of the 5.93 million tonnes of LNG that Singapore imports annually. Furthermore, a second receiving terminal is scheduled to come on stream before 2030²².

At the same time, Singapore has strengthened its energy ties with Australia, one of its key economic partners.

²¹ ENERDATA. 'Indonesia and Singapore advance 3.4 GW low-carbon electricity export plan', *Enerdata*. 7 July 2026. Available at: <https://www.enerdata.net/publications/daily-energy-news/indonesia-and-singapore-advance-34-gw-low-carbon-electricity-export-plan.html> (accessed 31 July 2026).

²² MARKET RESEARCH SINGAPORE. 'Doubling Down on Gas: Singapore's Second LNG Terminal Plans and GasCo's 2026 Buying Debut', *MRS*. 10 July 2026. Available at: <https://marketresearchsingapore.com/insights/articles/doubling-down-on-gas-singapores-second-lng-terminal-plans-and-gascos-2026-buying-debut> (accessed 31 July 2026).

The Protocol on Economic Resilience and Essential Supplies, signed in July 2026 and forming part of the bilateral free trade agreement, commits both parties not to impose restrictions on the export of diesel and LNG. Australia is one of Singapore's main suppliers of LNG, whilst Singapore, in turn, is Australia's largest supplier of refined products²³.

The regional integration of the Singaporean model extends beyond the strictly energy-related sphere. The *Johor-Singapore Special Economic Zone* (JS-SEZ), formalised in January 2025, effectively expands the economic sphere of the Singaporean hub.

The agreement combines Singapore's financial, commercial and logistical capabilities with the availability of land and industrial infrastructure in Johor and Pengerang, in Malaysia, and helps to strengthen the competitiveness of both territories. Rather than a relationship of direct competition, the initiative reflects the growing economic and energy interdependence between the two countries.

Singapore also aims to position itself at the forefront of renewable energy, even though Asia is still some way behind Europe in this regard. It has a particular interest in green hydrogen and biofuels, especially to supply its maritime *bunkering hub*.

Notable in this area are the Green and Digital *Shipping Corridors* established with Europe, Australia and the United States, designed to improve the resilience, efficiency and sustainability of global supply chains, as well as to accelerate the decarbonisation of maritime transport. China recently joined this network through an agreement with the port of Tianjin²⁴.

Conclusions

Singapore's main competitive advantage does not lie in the availability of any particular energy resource, but in its ability to integrate critical infrastructure, specialised services, financial instruments and regional relationships.

²³ ARGUS MEDIA. 'Australia, Singapore sign energy security, defence deal', *Argus Media*. 27 July 2026. Available at: <https://www.argusmedia.com/en/news-and-insights/latest-market-news/2857260-australia-singapore-sign-energy-security-defence-deal> (accessed 31 July 2026).

²⁴ THE STRAITS TIMES. 'S'pore, China to establish national green and digital shipping corridor; pledge to deepen ties', *The Straits Times*. Singapore, 25 October 2025. Available at: <https://www.straitstimes.com/singapore/spore-china-to-establish-national-green-and-digital-shipping-corridor-pledge-to-deepen-ties> (accessed 31 July 2026).

This model is not the result of a single policy, but of a succession of strategic decisions adopted since the 19th century and further developed after independence. Institutional continuity and the *People's Action Party's* long tenure in government have enabled the implementation of policies spanning several decades, thereby avoiding many of the discontinuities observed in other countries in the region.

The Singaporean model rests on three interrelated elements.

The first is its location on the Strait of Malacca, the main corridor between the Indian Ocean and the South China Sea, and one of the key routes for Asia's energy supply.

The second is the density of its economic and logistical ecosystem, comprising port infrastructure, refining and storage capacity, ship *bunkering* services, commodity markets, *risk management*, financing and banking stability.

The third is a network of regional agreements that enables it to partially manage the vulnerability arising from its lack of domestic natural resources.

The energy transition does not eliminate this logic, but rather requires it to be adapted. Singapore aims to incorporate new sources of electricity, liquefied natural gas, biofuels, hydrogen and alternative marine fuels without relinquishing its traditional role as a logistics and commercial hub.

The country's future significance will therefore depend less on domestic energy production than on its ability to continue acting as an intermediary, financing, storing and redistributing energy flows across the Asian continent.

Dependence on the Strait of Malacca will continue to pose a structural risk. Cooperation between the coastal states, coordinated patrols and mechanisms for the exchange of information reduce the risks associated with piracy, accidents and traffic disruptions, but cannot eliminate the consequences of a larger-scale regional crisis.

Similarly, the development of Great Nicobar, Thailand's land bridge project or the growing maritime presence of India and China could partially alter the regional balance; however, none of these could replace the combined capabilities concentrated in Singapore.

The Singaporean case demonstrates that a small state, lacking its own energy resources, can achieve considerable international influence through long-term planning, economic

openness and regional integration. However, its experience is unlikely to be replicated in other countries.

Finally, all the signs suggest that Singapore will continue to preserve its autonomy against a backdrop of growing competition between major powers such as India, China and the United States. Rather than strict neutrality, it appears that the country will continue to pursue a pragmatic balance with all the regional players.

The ability to maintain this balance, without adopting an exclusive alignment, will continue to be one of its key assets for its own energy security and that of the continent over the coming decades.

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