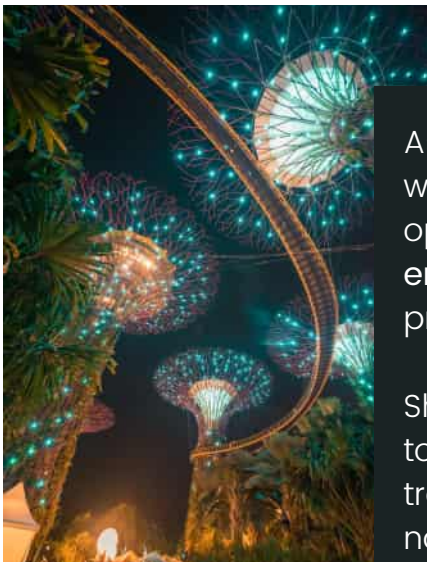


# Our Energy Security



## Key Takeaways

- ✓ Developments around the world can and will impact supply and prices of energy.
- ✓ Singapore is a price-taker, and is thus affected by global energy price movements.
- ✓ A secure and reliable supply of energy is critical to Singapore's survival and economic competitiveness.
- ✓ We must not take our energy security for granted; we need to do our part to conserve energy where possible.



## Background

As Singapore is a small country with no natural resources, we import almost all our fuel and have limited energy options. This also means that we are **price-takers for energy**, and hence are highly exposed to fluctuations in prices due to global demand and supply shocks.

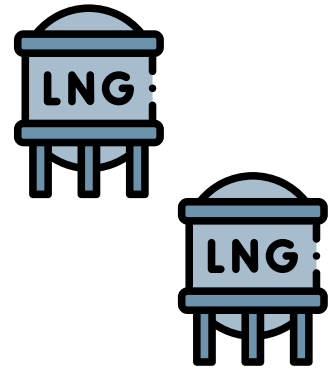
Shortly after independence, Singapore switched from coal to fuel oil for power generation. In the 2000s, we transitioned from fuel oil to the cleaner and more efficient natural gas. Today, around 95% of our electricity is generated using natural gas, up from only 26% in 2001.

Singapore relies on imported natural gas for almost all our electricity production. These comprise Piped Natural Gas (PNG) from Indonesia and Malaysia, and Liquefied Natural Gas (LNG) from around the world.

# Strengthening Singapore's Energy Resilience

Singapore works to strengthen our energy resilience by diversifying our energy sources. An example of this is the construction of our LNG terminal.

It enhances Singapore's energy security as we are able to supplement PNG with LNG from gas sources further afield. The diversification of fuel sources makes us less susceptible to price and supply rises.



## The Singapore LNG Terminal

Located on Jurong Island, the Singapore LNG Terminal began commercial operations in May 2013. This was the result of several years of work, which began with feasibility studies in 2005.

A critical infrastructure, the terminal allows Singapore to import LNG from global markets. By accessing diverse and competitive sources of natural gas worldwide, it enhances our energy security and resilience.

The terminal has the potential to support the growth of Singapore's LNG sector, and the development of Singapore as an LNG hub for our region. It can also catalyse LNG-related business opportunities and create new jobs in the energy sector.

Presently, the terminal supplies 25-30% of Singapore's total natural gas demand for power generation.



*The Singapore LNG Terminal (Source: STE What's Next)*



*The Singapore LNG Terminal (Source: STE What's Next)*

As a small country without any natural or energy resources, Singapore imports almost all our fuel. So we are vulnerable -- vulnerable to supply risks and fluctuations in prices. We have worked hard to protect ourselves from these risks, and to strengthen our energy resilience, for example, by managing the demand for energy and also by diversifying our imports.

Prime Minister Lee Hsien Loong at the [official opening of the LNG Terminal](#) on 25 February 2014

## Why are electricity prices rising now?



Singapore relies on imported natural gas for all our electricity production, and is therefore highly exposed to global supply and demand shocks.

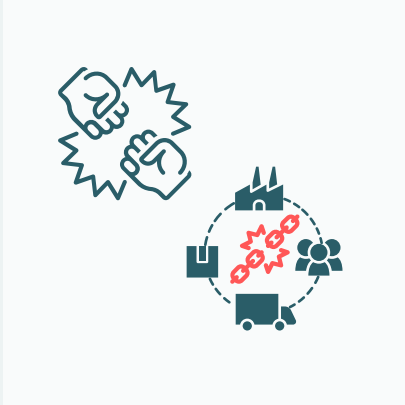
This **rise in fuel prices around the world has led to an increase in electricity prices domestically.**

Demand and supply factors such as these contribute to the high global energy prices:



### Rise in global energy demand

- Natural gas demand around the world has increased due to increased economic activities as the world emerges from the COVID-19 pandemic.
- There is a shift from coal to cleaner-burning fuel sources such as natural gas to meet climate goals.



## Tight supply conditions

- Recently, the global energy crunch has worsened with the Russia-Ukraine conflict.
- Russia is a significant component of the global energy supply chain for two fuels: natural gas and oil.
- Russia's invasion of Ukraine is placing pressures on these supply flows because of physical supply chain disruptions, tightening sanctions, and other trade restrictions.

## What has been done?

In response to this ongoing energy crunch, measures which have been put in place since end-2021 include:

1

**Establishing a stockpile of LNG** for generation companies (gencos) to tap on in case of supply disruptions, bolstering the gencos' reserves.

2

**Directing gencos to maintain sufficient fuel for power generation.** This is in addition to the fuel reserves they are required to stockpile under their licences (i.e. at least 60 days).

3

**Extending the Temporary Electricity Contracting Support Scheme** which offers short-term retail contracting options to large consumers and provides relative price stability.

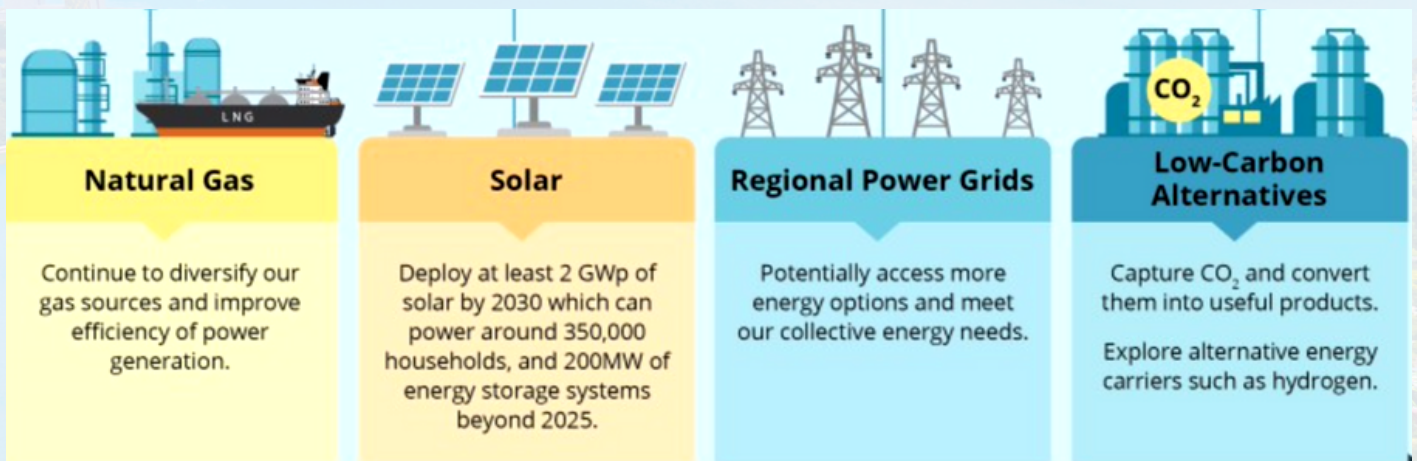


# The future of Singapore's energy story

For a small country with no natural resources, as well as limited land and access to renewable energy sources like solar and wind, sustainable development matters. As a low-lying island city-state, climate change can be an existential threat.

With challenges brought about by climate change, the way Singapore uses and produces energy will need to change. This is particularly so if our energy demand continues to rise with economic development.

To work towards a future where energy is reliable, produced and consumed efficiently, under the Singapore Green Plan 2030, Singapore will need to decarbonise the power sector by tapping on the four switches:



(Source: Ministry of Trade and Industry, via Energy Market Authority)

However, this is a complex exercise and, if not managed well, could lead to unanticipated security and reliability risks. Singapore will need to carefully pace the energy transition and minimise unintended disruptions.

The transition to renewable energy may also not mean cheaper electricity. Infrastructure enhancements (e.g. to the grid) will add to overall costs. This is an inevitable but necessary trade-off in the energy transition.

In tandem, on the demand side, the government will continue its efforts to improve energy efficiency in all sectors.

# TWO WAYS YOU CAN PLAY A PART

#1

Make energy conservation a way of life, e.g. choosing energy efficient appliances, adopting energy-saving habits.



#2

Be prepared for possible emergency scenarios.



“ We will need together, as a nation, to strengthen our defences against external shocks, to pivot and transform our businesses to adapt to the changing global environment, and we have done this many times before... Above all, we will need to work together, the people, the businesses, and the government, so that we can weather the headwinds and emerge stronger.

Second Minister for Trade and Industry Dr Tan See Leng for Parliament Sitting on 4 April 2022

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