

PDEOZE PowerContainer

Thailand grid-side energy storage project



Overview

How can Thailand manage its energy transition?

Thailand can manage its energy transition and solve the energy trilemma of sustainability, security and affordability by accelerating renewable power additions and grid capacity expansion, while limiting new thermal power capacity addition.

How can Thailand improve its energy security?

By adding more renewables to its power system, Thailand can dramatically reduce the need to run gas power plants as baseload generators, thus reduce annual gas consumption (Figure 38 and Figure 39). This will in turn strengthen Thailand's energy security and reduce exposure to volatility of global LNG prices.

How many mw can a solar generator store in Thailand?

Their total combined storage capacity was 994 MW. Interestingly, this allowed generators to sign semi-firm power purchase agreements (PPAs) with the Electricity Generating Authority of Thailand (EGAT) with minimum availability guarantees. Many solar projects in Thailand have non-firm PPAs in place due to a lack of storage on site.

How will Thailand's energy policy affect the energy sector?

As Thailand plans to add significant amount of renewables capacity in the next 13 years, the government would consider more flexible gas power contract. As a result, thermal power plants will likely see their operational hours cut further. This will lead to costlier coal and gas power. Source: BloombergNEF.

Does Thailand need a battery energy storage system?

Thailand may lack the Battery Energy Storage Systems (BESS) necessary to navigate supply and demand challenges. The 2024 PDP draft included 10,000 MW of BESS, but this may see the country struggle to fulfil carbon neutrality

and Net Zero commitments over the coming decades.

Why do some solar projects in Thailand have non-firm PPAs?

Many solar projects in Thailand have non-firm PPAs in place due to a lack of storage on site. Arrangements, including BESS, reduce the strain on power grid infrastructure and allow for better planning. On the downside, these do not improve grid stability, nor do they provide power generators with more pathways to increase revenue.

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