Energy Transition: From Cost Pressure to Competitive Advantage

Mr. Akanat Promphan, Minister of Energy

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Executive Summary

Thailand's current energy challenges are creating an opportunity to accelerate the transition toward a more secure, flexible, and sustainable energy system. The forthcoming Power Development Plan (PDP), greater access to direct PPAs, grid modernization, and increased private-sector participation could strengthen energy security while supporting emerging industries such as AI and data centers. Clear and timely implementation will be critical to attracting long-term investment without passing additional energy and resource costs on to households.

How Will Data Center Investment Affect Thailand's Energy Landscape?

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- Data center investment should not lead to higher electricity prices for households, as the forthcoming regulatory framework will ensure that incremental costs are borne by the new users rather than the general public.
- Direct PPAs will be a key mechanism for enabling data centers to access electricity at a competitive price. Although electricity purchased from the state may be priced above residential rates, direct PPAs can help offset the additional cost.
- Further clarity on the direct PPA framework is expected in the near term.
- Higher Ft charges are not the main factor discouraging investors. Policy uncertainty and lengthy implementation timelines are of greater concern.
- Thailand therefore seeks to capture the economic benefits of data center investment without compromising household living costs or adversely affecting local communities.

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- Thailand has sufficient water resources to accommodate substantial data center investment, including the potential use of seawater where appropriate.
- Nevertheless, water resources must be managed responsibly to prevent adverse effects on surrounding communities.
- Data center investment could create wider opportunities for Thailand, particularly in cloud infrastructure, digital services, and power-related businesses.

- Data centers should utilize locally available infrastructure, energy resources, and domestically manufactured components wherever possible.
- Beyond physical investment, data centers should transfer technological knowledge and expertise to Thai workers.
- Thailand must strengthen both academic and vocational education to ensure its workforce remains ahead of evolving industry requirements.

How Can Thailand Maximize the Benefits of Data Center Investment?

Mr. Yaniv Ghitis, Chief Commercial and Investment Officer, Digital Edge DC

- Attracting investment associated with AI and data centers should be viewed as a long-term undertaking spanning approximately 20–30 years.
- Investors require clarity across several areas, particularly government policies, long-term partnerships, and the availability of reliable utility infrastructure.
- Support from government agencies, including the BOI and EGAT, together with greater ease of doing business, has helped facilitate the sector's growth.
- Long-term partnerships among the government, energy providers such as B.Grimm, and data center operators will be essential.
- Data center operators are exploring dedicated water resources and closed-loop cooling systems to reduce consumption and minimize the impact on surrounding communities.
- Air-cooling solutions can also be deployed in Thailand to reduce reliance on water and other shared resources.
- Data center operations should not increase electricity or utility costs for residential consumers.
- The economic benefits should extend beyond construction to include long-term employment, technology transfer, and skills development.
- Partnerships with universities and corporations will be important for preparing local workers for jobs created by the industry.

Energy Transition as a Key Policy Mandate

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- Energy transition is key to unlocking new economic opportunities amid the challenges currently facing Thailand.
- The new PDP will emphasize both the energy transition and the development of emerging industries. The plan could become clearer as early as September.
- The forthcoming PDP is expected to extend through 2050, in line with Thailand's net-zero ambition, with renewable energy accounting for at least 60% of the generation mix.
- The plan is also expected to address carbon capture, small modular reactors (SMRs), and direct PPAs.
- Thailand must compare the costs and effectiveness of renewable energy and carbon-capture solutions while maintaining energy security.
- Four alternative energy pathways have been presented for public consultation, requiring close cooperation between the public and private sectors.

- The proposed THB 200 billion borrowing legislation for the energy transition would support solar rooftop installations, net billing, and grid modernization.
- Most future energy investment is expected to come from the private sector. Businesses should therefore be encouraged to develop their own power plants or install solar panels to meet part of their electricity demand.
- Thailand may increase natural gas imports from Myanmar over the longer term, potentially reducing the country's reliance on imported LNG.

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- B.Grimm views Thailand's people as one of the country's greatest strengths and a key driver of long-term economic advancement.
- The energy transition should be accompanied by workforce development so that Thai people can participate in and benefit from emerging industries.

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- The required policies are being developed, while private-sector collaboration, infrastructure investment, and educational advancement will complement the transition.
- Policy and infrastructure decisions should support long-term partnerships, given the multi-decade investment horizon of data center operators.

Changes in Thailand's Energy Policy

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- Direct PPAs are no longer expected to be limited to 2,000 MW or restricted to data centers.
- All industry groups will be able to participate in the direct clean-energy market.
- Grid modernization and clear implementation frameworks will be essential to supporting broader access to clean electricity.
- Investors are more concerned about unclear policy direction and prolonged implementation timelines than about energy prices themselves.
- Policy implementation is expected to become significantly clearer over the coming year, improving Thailand's ability to attract foreign investment.
- Greater regulatory certainty, broader clean-energy access, and a modernized grid could unlock new investment opportunities across the economy.