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# THAILAND Newsletter

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## ERC Sandbox for P2P Electricity Trading – Key Considerations for Rooftop Projects

### Introduction

The Thai Energy Regulatory Commission ("**ERC**") continues to adopt measures that will allow for increased participation by private parties in the energy sector. The ERC's latest pilot program is a new regulatory sandbox that will allow for limited-scale deployment of peer-to-peer ("**P2P**") electricity trading. If successful, this program may serve as a template for wider-scale adoption across the entire country.

### Background

Until now, owners of private rooftop solar projects have only been able to supply electricity to users in the buildings where the project is located. Developers have been unable to sell electricity to users at a distance due to the absence of available transmission and distribution systems.

Rooftop solar developers are currently unable to utilize the distribution and transmission systems of governmental utilities, such as the Provincial Electricity Authority ("**PEA**") and the Metropolitan Electricity Authority ("**MEA**"), for the supply of electricity to third parties. The justification for this restriction is that the Thai electricity market is an enhanced single buyer model, where governmental authorities act as the dominant buyers and suppliers of electricity.

### Current regulatory limitations

From a regulatory perspective, the Grid Connection Codes of the PEA and the MEA also require that users of private electricity generators include mechanisms that prevent the dispatch of electricity from private electricity generators into the transmission system of the relevant governmental utility. Users of private electricity generators are persons who: (a) own electricity generators or purchase electricity from private rooftop solar project owners; and (b) simultaneously connect their electricity generators with the transmission system of either the PEA or the MEA to purchase backup electricity from the relevant governmental

utility. This requirement ultimately prevents the supply of electricity between private entities through the transmission system of either governmental utility.

#### **Permitted private power generation**

Private parties may build their own transmission systems for certain types of projects, such as gas-fired cogeneration plants or floating solar facilities in industrial estates. However, building a transmission system for a rooftop solar project may be uneconomical given the high cost of a transmission system compared to the expected economic return from the electricity generated by a rooftop project.

### **Enter the Sandbox**

In September 2021, the ERC granted its approval in principle for action plans to establish the ERC Sandbox to test technologies involving electricity trading and supply (the "Sandbox"). As the public hearing for the Sandbox occurred on 14 October 2021, the ERC is in the process of amending the action plans before allowing the selected private entities to undertake their projects within the Sandbox environment.

Among other projects, three P2P electricity trading projects involving private entities were approved in the action plans. The period for the Sandbox will be three years, though the period for electricity trading can be no longer than two years. The outcomes of these P2P electricity trading projects and the Sandbox more generally will be reflected in the draft Third Party Access Code that the ERC is currently reviewing.

Within the Sandbox environment, the selected private entities will be able to trade and supply electricity to other private entities through the transmission systems of the MEA or the PEA. Based on the action plans, the regulatory requirement which prevents the dispatch of electricity into the transmission system of either the PEA or the MEA would not apply to the projects within the Sandbox.

The PEA or the MEA will be entitled to the payment of wheeling charges from the private entities in return for the selected private entities' use of their transmission systems. The wheeling charge approved by the ERC was Thai Baht 1.151 per unit.

The trading of electricity under the Sandbox is expected to be made through a platform involving blockchain technology to increase security and efficiency of electricity trading.

### **Key Considerations for Rooftop Developers**

The introduction of the Sandbox illustrates the ERC's desire to continue opening Thailand's electricity markets. Over the past few years, there has been a significant uptick in behind-the-meter rooftop and floating solar developments in Thailand. The corporate power purchase agreements ("PPAs") for these projects are based on the premise that there will be a single offtaker. Some PPAs in the market contain general language to address the potential inception of a net metering scheme, though given the absence of a specific regulatory regime, the details of these provisions are speculative by nature.

With the prospect of P2P sales potentially on the horizon, rooftop solar developers should consider whether it would be appropriate to revisit their existing PPAs. Some questions to consider are:

- Does the developer have the right to expand the capacity of existing projects by installing more PV panels?
- Does an offtaker have the right in the PPA to take in priority to third party buyers?
- If the developer will sell electricity to third parties under a P2P scheme, should the occupant of the building be entitled to payments for the developer's use of the rooftop?

### **Conclusion**

Although the P2P scheme to be tested in the Sandbox is likely a few years away from nationwide deployment, developers should be aware of regulatory trends to improve their market position.

We will continue to monitor any updates on the Sandbox, P2P electricity trading generally, and the ERC's action plans and will keep you posted on further developments.

If you have any questions in relation to the issues raised in this briefing, please contact the authors in the left-hand column.

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