

## Natural Resources &amp; Energy Newsletter



## Thailand's Regulatory Framework for Waste to Energy Projects

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To encourage and promote the deployment of renewable energy, Thailand has established the Alternative Energy Development Plan: AEDP 2015 - 2036 (“**AEDP 2015**”) which sets out a policy to source 20 percent of net electrical energy demand from renewable sources by 2036 and sets a target of 500 megawatts capacity of generation from municipal solid waste (“**MSW**”). However, with the uptrend in renewable energy generation and consumption, the AEDP 2015 was updated in 2020 by the Alternative Energy Development Plan: AEDP 2018 - 2037 (“**AEDP 2018**”) to increase the share of renewable energy to 30 percent of net electrical energy demand from renewable sources by 2037 and add 400 megawatts to the targeted capacity for generation from MSW.

Although waste to energy (“**WTE**”) would account for a small proportion of the energy mix in both AEDP 2015 and AEDP 2018, Thailand has recognized the benefits of WTE as a means of managing the increasing municipal waste, reducing the need for landfills and avoiding emissions of greenhouse gases which escape from landfills. To promote WTE projects, the government has adopted the Public-Private-People Partnership (4P) approach, a bottom-up participative strategy which brings community engagement throughout the process of waste collection and sorting activities to WTE conversion.

In this Article, we will explore the regulatory framework for WTE projects using MSW collected by Local Administrative Organizations (“**LOAs**”) in (1) the WTE project study and private operator selection process; and (2) the power generating and selling process.

### 1 WTE Project Study and Private Operator Selection

LOAs are typically responsible for waste management and disposal in their respective localities. They may collect the waste, transport and dispose of it by themselves or delegate those activities to the private sector. These tasks need to comply with such laws as the Public Health Act, the Maintenance of Public Sanitary and Order Act, and the Enhancement and Conservation of National Environmental Quality Act.

If any LOA wishes to initiate a WTE project, the typical process would be as follows:

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### **1.1 Proposals based on WTE Project Study Outcomes**

The LOA will act as the project owner conducting a feasibility study on the WTE project by taking into account various factors such as the volume of MSW and energy consumption in its locality, the possible structure of joint investment between the LOA and a private operator, the benefits and risks of the project, and the applicable technology. Then, it will present the outcome of the WTE project study to the relevant Provincial Office for Local Administration which will in turn propose a project for potential approval by the relevant Governor and Department of Local Administration of the Ministry of Interior.

### **1.2 Obtaining Approval from the Ministry of Interior**

The Department of Local Administration will propose the WTE project to, and seek comments from, the relevant committees, as well as approval from the Minister of Interior.

### **1.3 Selecting Private Operators**

After receiving approval from the Minister of Interior, the LOA will select the private operator through a bidding process, in accordance with the Public Procurement and Supplies Administration Act. Then, it will propose a draft agreement to be entered into between the LOA and the selected private operator to the Office of the Attorney General. Project operators are generally required to be a private or public company registered in Thailand with the objective of generating and selling electricity. There is no restriction on foreign shareholding; hence, operators can be 100% or majority owned by foreigners. However, this requirement could be revised from time to time by the Energy Regulatory Commission (“ERC”).

### **1.4 Reporting the Selection Outcome to the Ministry of Interior**

After the LAO signs the agreement with the private operator, it will report the outcome of the private operator selection to the Department of Local Administration and the Minister of Interior.

## **2 Power Generating and Selling**

The selected private operator will be required to obtain several permits and licenses to construct the power plant, operate as a power generator and sell the electricity. The significant permits and licenses are as follows:

### **2.1 Power Plant Construction**

A WTE power plant is typically classified as a Type 3 factory under the Factory Act. Therefore, it would require a Factory License from the Department of Industrial Works of the Ministry of Industry, and needs to be located in a specifically designated area under the factory and zoning laws.

The construction of a power plant would require a construction permit, and an Environmental Impact Assessment (EIA) or an Environmental Safety Assessment (ESA) may need to be submitted, or compliance with the Code of Practice (CoP) prescribed by the ERC may be necessary, as the case may be (this mainly depends on the projected wattage output and location of the plant). Once the construction is completed, the relevant authority (it depends, but mainly the ERC and the Industrial Estate Authority of Thailand (if the plant is located in industrial area)) will need to be notified so the building can be inspected and a Building

Certification issued.

## **2.2 Power Plant Operation**

Under the Energy Industry Act, an energy industry operation (including operating a power plant) generally requires a license from the ERC. An exemption applies in certain cases as prescribed in the Royal Decree, including an electricity generation business with a total capacity of less than 1,000 kVA. In addition, where the total capacity is 200 kVA or more, the business operator would also be required to obtain a Regulated Energy Generation License in accordance with the Energy Development and Promotion Act and the Royal Decree on Regulated Energy.

In this regard, business operators of WTE projects are eligible for investment promotion from Thailand's Board of Investment (the "BOI"). If granted the BOI investment promotion, they would be entitled to tax and non-tax incentives such as exemptions from or reductions of import duties on machinery, exemptions from corporate income tax, permits to bring into Thailand skilled workers and experts, and a permit for a foreign business operator to own land in Thailand. Foreign affiliated companies are eligible for the BOI investment promotion.

## **2.3 Sales of Electricity**

In 2014, the National Energy Policy Council resolved to introduce a Feed-in Tariff (the "FIT") program as a new pricing incentive policy to replace the previous Adder program, and in 2015, resolved to approve the purchase of electricity generated from waste under the FIT program without a competitive bidding process. Under the FIT program, a fixed amount per kWh will be paid during the 20 years of support, while under the previous Adder program, an adder rate was payable on top of the prevailing wholesale price of electricity for 7 years.

Once the ERC issues an announcement to purchase power generated from MSW, interested WTE project operators, which must be private or public companies registered in Thailand with the objective of generating and selling electricity, would need to submit an application, together with all required documents to the ERC for their consideration. If they are selected, they would be required to enter into a power purchase agreement with the Electricity Generating Authority of Thailand, the Metropolitan Electricity Authority or the Provincial Electricity Authority, as the case may be.

As Thailand has stretched its waste disposal capabilities due to rapid urbanization, a growing population and the expansion of the tourism industry, WTE projects could be one promising solution which could concurrently satisfy the increasing electricity demand in Thailand. With the current legal regime which is relatively open to investment by foreign entities, the WTE business is definitely one that foreign investors should keep an eye on.



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