



Regulation and competition issues in Thai electricity sector

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ABSTRACT

This paper explores the issues related to regulatory reform and liberalisation leading toward competition in the Thai electricity sector, which is still under the monopoly control of state-owned enterprises (SOEs). Following an overview of the current market structure of the Thai electricity sector, the process of liberalisation and deregulation that contributes to the uncompetitive market structure under SOEs' control is examined. The author asserts that there are problems within the Energy Commission and the Energy Industry Act BE 2550 (2007) that contribute to the continuance of an uncompetitive electricity supply. Possible reforms to the Thai electricity regulation are proposed with the aim of creating market competition and efficiency in the Thai electricity sector.

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1. Introduction

Thailand attempted to introduce reforms to the electricity sector in areas of market structure, organisational efficiency and regulation. The initial step of electricity liberalisation was by the introduction of private participation of independent power producers (IPPs) and small power producers (SPPs) in the electricity sector. The next step involved the policy of market-oriented reform by adopting a corporatisation plan. The government claimed that the corporatisation plan would lead to an increase in efficiency of electricity services, a decrease in electricity prices, and a lowering of the government's financial burden. However, the reform was implemented within an inappropriate regulatory framework that lacked consideration of creating structural change and increasing market competition. The implementation of the reform was only purported to transfer the state-owned enterprises' (SOEs) market power to the private investments.

This paper attempts to explore the issues relating to regulatory reform and liberalisation leading to competition in the Thai electricity sector. Section 2 of the paper focuses on the current market structure of the Thai electricity sector, which remains under the monopoly control of SOEs. Section 3 explores the process of liberalisation and deregulation of the Thai electricity sector, which contributes the uncompetitive structure in the electricity sector. This section also notes the Supreme Administrative Court's

decision to revoke the inappropriate liberalisation of SOEs in the electricity sector. The Thai Energy Commission and the Energy Industry Act BE 2550 (2007) (herein referred to as the Energy Act) that contributes to the structure of uncompetitive electricity supply is then discussed. Possible reforms to the Thai electricity regulation in order to create market competition and efficiency in Thai electricity sector are then proposed.

2. Current structure of the Thai electricity sector

In this part, the Thai electricity sector structure is discussed with a focus on the dominant market players, which are SOEs in generation, transmission, distribution and retail. The fact that the gas supply, a primary source of electricity generation, is also under the control of SOEs is also examined.

2.1. Market players: SOEs' market control

2.1.1. Generation and transmission

The Electricity Generating Authority of Thailand (EGAT), as an SOE, has the sole right and a significant role in the generation and transmission of Thai electricity. EGAT is presently the largest electricity producer, owning and operating its own power plants throughout the country. Its capacity to generate electricity accounts for 63,930.68 million kW h, which equates to 43.14% of the country's total electricity generation (EGAT, 2009). It also has the sole right to purchase power from other private producers under the government regulation of the enhanced single buyer scheme (ESB). It purchases approximately 84,270.25 million kW h of electricity from private producers; this is equal to 56.86% of the

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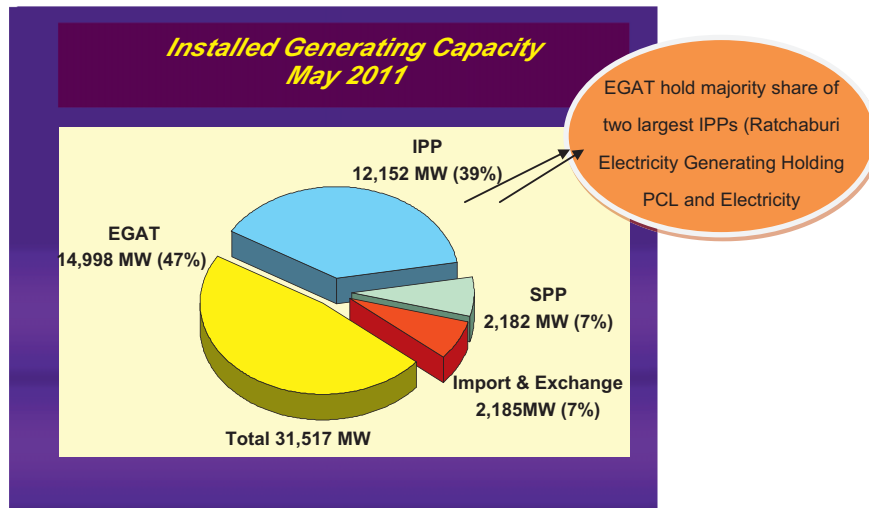


Fig. 1. Thai electricity generating capacity.
Sources: Energy Policy and Planning Office (EPPO, 2011).

country's total electricity generation (EGAT, 2009, p. 15). In 2008, EGAT has purchased 67,420.14 million kWh (45.49%) from domestic IPPs, 14,065.20 million kWh (9.49%) from SPPs, and 2,784.91 million kWh (1.88%) has been purchased from neighbouring countries (EGAT, 2009, p. 16).

Moreover, EGAT maintains its shareholding in the country's two largest IPPs—Ratchaburi Electricity Generating Holding Public Company Limited (RATCH) at 45%, Electricity Generating Public Company Limited (EGCO) at 25.41%, and District Cooling System and Power Plant Co., Ltd (DCAP) at 35% (EGAT, 2009, p. 24). Although there are many IPPs and SPPs supplying electricity to the EGAT grid, the RATCH and EGCO are the two largest IPPs and have market shares of country-wide electricity generation at 14 and 11%, respectively (EGCO, 2009; RATCH, 2009) (Fig. 1).

It thus can be seen that EGAT has a monopoly and is able to control the electricity generation and transmission based on the facts that: (1) it operates its own power plants (around 50% of market share), (2) it has the entitlement as a monopoly buyer of electricity generated from IPPs, SPPs, and neighbouring countries, (3) it has the majority share control over the two largest IPPs.¹

Although there is the potential to liberalise the Thai electricity supply by connecting with neighbouring countries under the ASEAN power grid interconnection policy (ASEAN, 2009), all importation of electricity from neighbouring countries such as Laos, Cambodia, and Malaysia have to be traded with EGAT, which is the sole electricity supplier in the country. The EGAT is thus a firm having monopoly power over the wholesale electricity supply in Thailand. The EGAT is the only firm permitted to buy electricity from various electricity generators (IPP, SPP and neighbouring countries) and supply to the distributors and retailers. The wholesale of electricity in Thailand is thus under the monopoly control of EGAT and there is no market competition in the wholesale section of electricity sector in Thailand. EGAT, by its monopoly position, is able to restrict the electricity generation (Russell, 2007) and to constrain supply from interconnected electricity from neighbouring countries (Deitz et al., 2009).

Based on this, in order to evaluate market power in the Thai electricity sector, market definition seems to be unnecessary as all wholesale electricity is solely under the EGAT's grid and

transmission control. This is because market definition in the electricity sector typically requires identification of potential suppliers and the ability of consumers to substitute an electricity supply (Geradin, 2004; Moss, 2005). However, with no alternative potential supplier available and the EGAT the sole trader permitted to supply wholesale electricity, distributors and retailers are obliged to buy electricity only from EGAT.

2.1.2. Distribution and retail

For the distribution and retail sectors, the markets are oligopolies by, and geographically separated, under the Provincial Electricity Authority of Thailand (PEA) and Metropolitan Electricity Authority of Thailand (MEA). The PEA is the sole distributor and retailer of electricity in the provincial areas of Thailand. The PEA is responsible for serving 73 provinces of Thailand and, according to the 2009 annual report, it supplied electricity 90,145 million kWh for Thai provincial customers (PEA, 2010). The PEA is vertically linked with EGAT and purchased 88,630 million kWh of EGAT's electricity in 2006 (PEA, 2010).² The MEA is responsible for supplying electricity to the Bangkok Metropolitan, Samut Prakan and Nonthaburi provinces. In 2008, it serviced around 42,235.9 million kWh to the three major urban areas. MEA is vertically linked with the EGAT electricity supply.

The PEA and MEA are thus local and regional monopolists and Thai consumers are obliged to rely on PEA's and MEA's operation for distribution and retail. Consumers are unable to choose their distributors and retailers because PEA and MEA are the only distributors and retailers to countrywide consumers. In other words, there is no competition in the distribution and retail section and Thai consumers must rely on the oligopolised distribution and retail from PEA and MEA.

With the current structure of Thai electricity, EGAT, PEA and MEA can enjoy their oligopoly position over Thai consumers. These SOEs are also under no direct competition and able to act as the government authority by law of their establishment under the Ministry of Interior.³

² Ibid.

³ See the law for establishment of EGAT PEA and MEA in (1) Electricity Generating Authority of Thailand Act, B.E. 2511 (1968), (2) Provincial Electricity Authority Act, B.E. 2503 (1960), (3) Metropolitan Electricity Authority Act BE 2501(1958). The three Acts requires three entities to be under the Ministry of Internal Affairs. See also the information on the website of Thai State Enterprise Policy Office Retrieved 20 August 2010 from www.sepo.go.th.

¹ EGAT has market share at 43.14%—the EGAT affiliated company and subsidiary (RATCH and EGCO) have market shares at 25%.

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