

Energy Industry Act: Implications for the Energy Sector in Thailand

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Abstract— This paper analyzes the likely implications of the Energy industry Act, which is expected to be enacted in 2007, on Thailand's electricity and natural gas business. The key features of the Act that provide significant changes in the energy sector are the establishment of the regulatory body and framework, the introduction of a new regulatory instrument called Power Development Fund and a new system for consumer protection. However the Act does not stipulate a clear design for energy structural reform. This paper also discusses the possibility of achieving regulatory governance and of promoting competition, consumer protection and environment.

Keywords— Electricity Supply Industry, Energy Industry Act, Thailand

1. INTRODUCTION

For many years Thailand has attempted to reform its energy sector. These endeavors started long before the financial crisis in 1997. However, the plans for energy structural, regulatory and ownership reforms were pushed forward and included in the Master Plan for State Enterprise Sector Reform (the Master Plan) in 1997 with the main objectives of separating the roles of policymaker, regulator and operators and of privatizing the energy state-owned enterprises (SOEs), which were, at that time, Petroleum Authority of Thailand (PTT), Electricity Generating Authority of Thailand (EGAT), Metropolitan Electricity Authority (MEA) and Provincial Electricity Authority (PEA).

Following the Master Plan, the government succeeded in partially privatizing PTT in 2001 but could not privatize EGAT due to the strong protests from various groups such as labor union and consumer whereas the other SOEs' privatization plans were put on hold. The ownership reform were again retarded whereas energy structural reform and regulatory reform have been proposed, planned and widely debated but progress in these reform has been very slow as well.

The most recent attempt to restructure electricity supply industry (ESI) is to employ an enhanced single buyer model. In this model, EGAT is a major power producer, a single buyer or monopsonist purchasing electricity from private power producers and a natural monopolist in transmission business. The private sector participation in electricity generation business has been in the form of Independent Power Producers (IPPs) and Small Power Producers (SPPs) to promote competition since 1992. Under the power purchase agreements, both IPPs and SPPs will sell electricity to EGAT.

MEA and PEA are responsible for distributing and retailing activities in the areas under their jurisdiction. Hence, in the current ESI model, the majority of consumers nationwide have to depend on the services of the three utilities: EGAT, MEA and PEA.

Another major energy SOE is PTT, a major operator in the country's oil and natural gas sector. Since more than half

of natural gas consumption are for electricity generation; PTT, the sole gas transmission, distribution and supply operator, together with its subsidiary, PTT Exploration and Production Co., Ltd., the gas producer, play a major role in determining the price of natural gas, which subsequently will affect the cost of electricity generation.

Before partial privatization of PTT, there were plans for structural as well as regulatory reform in the natural gas sector to promote competition and ensure nondiscriminatory treatment in the use of natural gas pipeline services. However, these plans were put on hold.

In addition, no independent regulator exists and some state-owned operators still perform some regulatory functions in energy sector.

There have been debates on how to pursue these reforms process more effectively. The experiences of other developing countries show that clear legal basis and steps such as restructuring, private participation, and establishment and role of regulatory bodies are necessary conditions for successful reforms [1].

In Thailand, there have been several endeavors to draft energy law. The recent attempt aims at passing the energy law, "Energy Industry Act", later in this paper called the Act, in 2007.

This law will consolidate the laws relating to "ESI and natural gas transmission network" with the objectives of promoting competition and private participation and providing fair and transparent electricity and gas network access in the energy sector, and establishing an independent, transparent, and accountable energy regulator as well as providing a new regulatory framework. The principal rationale to enact this Act is to identify and separate the tasks to be appropriately performed by the policymaker, the regulator and the operators.

The question arises whether this work-in-progress Energy Industry Act could move the energy industry towards the main goals of this Act. This paper will analyze and evaluate key implications of the Act for the energy sector.

It starts with political economy of energy law enactment in Thailand. Then salient features of the Act will be summarized. Implications of the Act for industry restructuring, promoting competition and regulatory governance will be discussed. Next, new regulatory policy, Power Development Fund, will be evaluated. Before concluding this paper, issues on environmental concern and consumer protection required by the Act will be discussed.

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2. POLITICAL ECONOMY OF ENERGY LAW

The Act, expected to be passed by the National Legislative Assembly by the end of 2007, is not the first attempt made to reform the industry. Back in 1998 during the Chuan government, under the State Enterprise Reform Master Plan which included the energy sector, a law was drafted for the first time to restructure the ESI and to establish an independent regulator overseeing the electricity industry and natural gas transmission. Clear separation of policy making, regulation and operation was an essential component of the reform and competitive markets were to be developed. EGAT was set to be corporatized and its new power plants were to be privatized, while PTT would also be privatized as a holding company owning natural gas, oil and other related businesses. These actions were expected to lead to more competition in electricity and natural gas. However, they were strongly opposed by workers unions in EGAT, and to some extent by unions in MEA, PEA, and other state enterprises. These unions are among the strongest, well-organized and most vocal labor groups in the country. Their protests against the Master Plan, and particularly against privatization created significant political pressure on the government and contributed to the delay and eventually the failure in moving the law beyond its drafting stage.

The Thaksin government took over in 2001 as a strong single-party administration, with a clear intention to privatize state enterprises by corporatization and selling their shares in the stock market. The initial public offering of PTT was promptly implemented in 2001 and, though financially successful, was criticized as being politically manipulated with initial lots of shares unfairly allocated to government party supporters. Later on, the Energy Ministry again saw a need for an independent energy regulator and even set up an interim regulator for the electricity sector in 2005-6. In the meantime, it revived a plan to legislate the restructuring of the electricity industry and its independent regulatory framework. The original law drafted during the previous government was revised, and natural gas transmission was specifically taken out of the text, leaving electricity the only activity to be regulated.¹ The revised version was sent to the Minister for his approval, but for some reason it was not submitted to the Cabinet before the government was toppled by a military coup on 19 September 2006.

While it is unclear why the second draft was delayed, there have always been some factors, other than workers unions' opposition, which tend to obstruct the move towards having an energy law. It has never been settled on the type of market arrangement which is suited to the Thai situation. The Master Plan suggested a competitive wholesale power pool previously adopted in England and Wales. Later when England switched to the New Electricity Trading Arrangement, policymakers in Thailand started to have second thoughts on the power pool model. Some experts also proposed a Nordic model as another alternative. Critics were quick to point to an example of failure in California where an electricity crisis in 2000, with rolling blackouts and sky-high tariffs, was said to be caused by its 1996 electricity deregulation law and poor market design. A study

commissioned by EGAT predictably recommended an "enhanced single buyer" model in which EGAT would remain the only wholesale buyer of electricity from all power plants. With different market models to be selected, and with some degree of uncertainty in the outcome of this politically sensitive reform, those politicians who had to decide chose to play it safe by maintaining the status quo, in as far as legislative changes are concerned. Only necessary changes were made within the existing laws and regulations.

Another voice against privatization comes from a group of consumer protection non-government organization (NGO)'s which campaigned against the way in which the Thaksin government handled state enterprise privatization. Citing the case of PTT share selling as an example, they argued that the government's real motive of privatization was for politicians in power to pocket huge profits from floating state enterprises on the stock market. In 2005, they succeeded in obtaining a court verdict to nullify the corporatization process of EGAT on the grounds that it was not in full compliance with the Corporatization Law. This represents a serious setback for the government in pushing for a reform with legal backing.

The Act being examined in this study is in fact the result of the third attempt to legislate energy reform. Dr. Piyawat Amaranand, Energy Minister in the Surayut government and former Director-General of the Energy Policy and Planning Office, wasted no time in carrying out a pro-reform mandate, with an energy reform law being high on the agenda. A drafting committee was headed by a senior official from the Energy Ministry, and included representatives from relating government agencies (Energy Policy and Planning Office (EPPO), Finance, Industry, National Economic and Social Development Board, and the Council of State), state enterprises (EGAT, MEA, PEA, and PTT), the Federation of Thai Industries, Thai Chamber of Commerce, NGO's, and some academic experts in economics, law, and engineering. Four public hearings on the final draft were held in Bangkok, Surattanee, Chiangmai, and Khonkaen, before it was submitted to the Minister and the Cabinet. Despite a strong protest by the labor unions against the draft, the government approved and forwarded it to the National Legislative Assembly. Being an appointed and not elected government probably explains why such a politically sensitive law can be pushed through within a relatively short time period.

3. SALIENT FEATURES OF ENERGY INDUSTRY ACT 2007

As discussed in the previous section, there have been some attempts to draft the Act since 1998. Some have failed due to various reasons. This paper will focus only on the recent attempt to draft the Act in 2007.

The key rationale for energy legislation follows the government's energy industry restructuring policy to separate the roles of policymakers, regulators and operators in the energy industry from each other. This legislation has been designed to provide the paradigm shift for regulatory reform. The major aims are to establish a regulatory body, and a regulatory framework and to centralize regulatory tasks under one regulatory body.

With the belief that when regulatory institution is established and regulatory framework and tasks are in place, competition, efficiency and private participation will be

¹ The fact that the Energy Minister during the law drafting was former President of PTT may explain why natural gas was omitted from this version of the law. But this can only be footnoted and cannot be confirmed by the authors.

enhanced. Therefore, this Act does not explicitly provide any sections on vertical or horizontal industry unbundling and designing of electricity and natural gas markets. The policy on industry restructuring reform is left to the government’s discretion.

The key objectives and policy guidelines, as stated in Sections 7 and 8 of the Act, are summarized in Table 1. The main objectives of the Act are to promote supply-side efficiency and energy security, to promote competition and to protect consumers’ benefits and environment. Policy guidelines are set to achieve these objectives accordingly.

Key features of the Act

As shown in Table 2, the Act has attempted to separate the authority and duties of policymaker from the newly established regulator, called Energy Regulatory Board (the Regulator). The main duties of the Minister are to propose policy on energy industry structure to the Cabinet and to consider power development plan, investment plans and operational plan of the Regulator and the budget of the Office for submission to the Cabinet for approval; and to propose various policies on energy industry operation and Power Development Fund to the National Energy Policy Council (NEPC). According to the Act, policymaking role in this industry is played by the multiple government agencies including the Cabinet, the Minister and the NEPC. Since the Cabinet will approve operational plan of the Regulator and budget of the Office, the Regulator is considered as “ministerial regulatory agency”.

The key feature of the Act is to establish the Regulator and to centralize regulatory tasks under one agency. The authority and duties of the Regulator cover most of regulatory tasks including supply-side regulatory tasks such as licensing, developing load forecast, maintaining energy security and reliability, monitoring of energy business operation, issuing regulation on energy industry operation and equipment standards and quality and promoting use of renewable energy.

However regulatory authority and duties of the Regulator do not include direct tariff determination and regulation of energy network systems. The regulatory tasks in these areas are limited to approval of tariff proposed by licensees. As for energy network system the tasks are limited to monitoring the codes and conditions to utilize the network stipulated by the Energy Network System licensee. The Regulator will not have authority to establish these codes and conditions whereas Energy Network System licensees are entitled to do so.

Another key feature of the Act is consumer-side regulatory tasks, particularly consumer protection via energy service standard establishment and enforcement and community protection against unfavorable effect of energy industry operation via the Power Development Fund. The effectiveness of these tasks will be enhanced by having Regional Energy Consumer Committee representing energy consumers in each area.

4. IMPLICATIONS FOR INDUSTRY RESTRUCTURING AND PROMOTING COMPETITION

According to the Act, energy industry structure is policy issue and will be determined and considered by the Cabinet. The Act does not clearly stipulate the energy industry restructuring policy toward a market-based regime. It does not contain explicit measures conducive to promote competition and to change from the enhanced single buyer model to multi-buyer model. One of the reasons to push the Act through without feature of energy structural reform is an urgent need for establishment of regulatory body and framework in this sector. To avoid the protest on the Act, this feature is left for Cabinet’s consideration in the future. However, it should be noted that it somehow creates the uncertainty on implementation of energy structural reform since it is not clearly stipulated in the Act.

Table 1. Key objectives and policy guidelines of the Energy Industry Act

Category	Description
Objective	To promote energy supply security and adequacy To protect consumers’ benefits in terms of both tariffs and service quality To promote competition and prevent abusive use of dominance To promote nondiscriminatory and transparent service provision of energy network systems To promote efficiency and fairness in energy industry operation To promote efficient use of energy and natural resources To promote the use of renewable energy with less adverse impact on the environment
Policy guideline	To supply adequate energy to meet demand with good quality and security at fair and reasonable prices by employing and developing local renewable energy and indigenous energy resources for the economic, social and environmental sustainability and reducing energy import dependency To promote economical and efficient use of energy and application of efficient technologies as well as the distributed generation system in order to reduce investment, fuel costs and associated impact of energy production and consumption and to increase country’s competitiveness To promote participation of the local communities and general public in energy management and monitoring to ensure that management and tariff determination are carried out with transparency under jurisdiction of regulatory body to protect consumer and to ensure fairness for all stakeholders To support energy operation as the basic infrastructure and to provide energy security and reliability by which state is in charge of energy network system, energy network system operator and hydro power plants and to maintain the appropriate level of fuel mix

Although the policy on energy structural reform is out of the regulator's hand, competition in this industry can be promoted through new entry and nondiscriminatory access to energy network systems.

To allow new entry, the Regulator has authority and duty to issue licenses for different types of energy industry operation as shown in Table 3. However, there might be some energy-related activities exempt from the license requirement by the Royal Decree issued by the Minister. Again the Act allows political interference into regulatory tasks.

In addition, the Act does not separate the types of business into competitive and natural monopoly business to apply for different types of licensing but leave it for the Regulator's discretion. Also, the Act does not disallow the multiple licenses. Hence there might be possibility that some state-owned energy incumbents presently owning competitive energy business and energy network system

business and already endowed with monopoly and monopsony power will retain and exercise these powers over other licensees.

To promote fair competition, the Act emphasizes as one of the main objectives the concept of nondiscriminatory and transparent practices to utilize the energy network systems, currently owned and operated by EGAT, PEA and MEA in electricity sector and PTT in natural gas sector. According to the Act, the regulator is entitled to issue license to Energy Network System Operators but its authorities over operation of energy network system are limited to monitoring any codes and conditions regarding the network systems set by the licensees and establishing the criteria and procedures for the licensees to disclose some information as shown in Table 3.

Table 2. Key features of the Energy Industry Act

Category	Key features
Policy	<p>Policymaker (Minister) have the authority and duties:</p> <ul style="list-style-type: none"> Propose to the <i>Cabinet</i> the policy on the energy industry structure Propose to the <i>National Energy Policy Council</i> policy on energy procurement; policy on diversification of fuel sources and types for power generation; policy on protection against and solutions to energy shortages; policy on targets and strategies of the energy industry operation; and policy on contributions to be sent to the Power Development Fund and subsidy payment from the Fund Consider the power development plan, investment plans of the electricity supply industry, the natural gas procurement plan and the energy network system expansion plans for submission to the Cabinet for approval Set policy on customer service standards and energy industry operation standards; and policy on extensive provision of energy services and energy services for the underprivileged including the policy dealing with the energy consumers' petitions Consider the operational plan of the Energy Regulatory Board and the budget of the Energy Regulatory Office for submission to the Cabinet for approval Approve the rules and Codes of Conduct of the Board Members and the competent official
Regulator	<ul style="list-style-type: none"> Establishment of Energy Regulatory Board (the Regulator) and Energy Regulatory Office (the Office) Authority and duties of the Regulator Term of the Board Members Qualification and disqualification of the Board Members Screening of qualified persons to be nominated Board Members by a Screening Committee Composition and qualification of a Screening Committee Selection and appointment proceedings of the Board Members
Regulation	<p>Centralization of regulatory tasks undertaken by the Regulator including of:</p> <ul style="list-style-type: none"> Licensing Tariff approval Developing load forecast Maintaining energy security and reliability Establishing power purchase rules and regulation Monitoring of energy business operation Issuing regulation on energy industry operation and equipment standards and quality Issuing regulation on the Power Development Fund Promoting and supporting research and development work and human resource capacity in energy sector Promoting the use of renewable energy and energy that has less adverse impact on the environment
Energy network systems and energy network system operations	<p>Energy Network System Licensees are empowered to:</p> <ul style="list-style-type: none"> Develop their energy network system expansion plan for submission to Minister of Energy, if they were state-owned. If the licensees were not state organization, the licensees shall submit the plan to the Regulator. Allow other licensees to utilize the networks without any discriminatory practices in accordance with the codes and conditions stipulated by themselves Disclose the contracts, agreements, conditions and tariffs for utilization of or connection to their network systems Be responsible for the control, management and regulation of the energy network systems to ensure the system balance and security
Consumer protection	<ul style="list-style-type: none"> Consumers are protected against failure to meet the service standards and energy demand especially in no energy service area. Power development fund will be set up for public service obligation, particularly in remote area, to develop a locality that is affected by the power plant construction and to promote the use of renewable energy. Establishment of the Regional Energy Consumer Committee, representing energy consumers in each region

As stipulated in Part of Energy Network Systems and Energy Network System Operators in the Act, Energy Network System Licensees are empowered to regulate, particularly their tariff, and control over energy network systems. As long as the Energy Network System Licensees are state agencies, they are allowed to develop their energy network system expansion plans and submit them directly to Minister of Energy. Thus, the licensees will be given excessive powers by the Act.

Non-discriminatory open access to the network is a prerequisite to fair competition and enables other licensees to reach consumers through a network. The rules regarding open access should be set by the regulator and be decided before issuing licensing.

5. IMPLICATIONS FOR REGULATORY GOVERNANCE

One of the key criteria for the successful regulatory reform is to establish the regulatory body. This regulatory

body should be designed to enhance regulatory governance. In this section, the regulatory framework in the Act will be evaluated whether it will enhance the regulatory governance.

According to [2], regulatory governance is defined as the mechanisms that societies use to constrain regulatory discretion and to resolve conflicts that arise in relation to those constraints. The design of regulatory mechanism must rely on the constitutional, legal and political characteristics of the country.

Therefore the regulatory structures and instruments employed in each country are different. In other words, regulatory mechanisms should be devised corresponding with its institutional endowment. Undoubtedly the legislation is the key attributes of institutional endowment. The regulatory governance is an important institutional means that leads to the end to ensure that all of objectives set in the Act are accomplished.

Table 3. Authority and/or duties of Energy Regulatory Board

Aspect	Authority and/or duties
Licensing	Determining the criteria, term and fee for each license according to the size and characteristics of each energy industry category Announcing stipulations of the qualifications of a licensee, the procedures of the application for a license, the criteria, conditions and processing time of license issuance, including the license fees and the fees for the energy industry operation Granting and issuing a license Specifying duration and extension of a license Collecting licensing fee Stopping or suspending the energy industry operation who has not obtained any license Suspending or canceling the license who violates the provisions of the Act or lacks the qualification stipulated by the Regulator For energy security, instructing licensees to increase or decrease the energy supply and to negotiate with natural gas sellers Prohibiting any acts that exert abusive use of monopoly power or that reduce competition or limit competition in the energy service provision
Tariff approval	Regulating tariffs in line with the policy and guidelines as approved by Ministry of Energy and National Energy Policy Council Determining the principles and criteria of licensees' tariff determination Approving tariff which is determined by licensees through transparent process with stakeholders' participation Adjusting tariff or ordering the licensees to adjust the tariffs if tariffs become inappropriate
Energy network systems and energy network system operators	Issuing license to Energy Network System Operator Monitoring the codes and conditions stipulated by the Energy Network System licensees to coincide with principles of non-discriminatory practices and energy security, safety and quality and for consumers' benefits Establishing the criteria and procedures for the Energy Network System licensees to disclose their contracts, agreements, conditions and tariffs
Consumer protection	Stipulating energy service standard Establishing regulation to penalize the licensees who fail to meet the standards Assigning a licensee to provide energy services in no energy service area Having authority to announce the establishment of the standard criteria of contracts and conditions pertaining to energy service provision Managing the Power Development Fund Appointing the Regional Energy Consumer Committee and determining its qualification, terms of office, working procedures and remuneration
Public hearing	Prior to making any decisions or issuing any regulations, rules, announcements or codes of the Regulator, the Regulator shall provide public hearing except for the case of emergency or exigency to maintain energy security.
Information disclosure/dissemination	Any reasons and voting for any decisions or issuance of regulations, rules, announcements or codes shall be recorded in the quarterly report, disclosed and made public to interested persons or posted in the website of the Office.

Following [3], the six aspects of regulatory frameworks which characterize the governance elements of regulation will be employed to evaluate possibility that the Act would enhance regulatory governance in the future. It consists of three aspects that relate to institutional design: clarity of roles and objectives; autonomy and independence; and accountability. Another three aspects relate to regulatory processes and practices: participation, transparency and predictability.

Institutional design

The “roles and objectives” of the Minister and the Regulator are clearly stipulated in the Act. It is expected that the Act would help to reduce any possible confusion about which functions and policies are carried out by Minister and by regulator. That would make regulation more effective.

The Act provides certain degree of “autonomy and independence” to the regulator through some features.

Firstly, the Act clearly defines the qualifications, disqualifications and removal criteria of the Board members; selection and appointment process and procedure; and qualification of Screening Committee and screening criteria. The Act also specifies a fixed term (six years) and discharge of Board members. The Board members are barred from taking any energy-related career or practice during and two years after the end of their terms to prevent a conflict of interest.

Next, Screening Committee comprises of seven members, four of which are former bureaucrats and three of which are representatives of the Federation of Thai Industries, the Council of Engineers and the Non-profit organization. The mixture of these members raises concern with political manipulation of the screening and selection process.

In addition, after screening and selection process, the Screening Committee shall propose the names of the selected persons to the Minister in order to submit them to the cabinet for approval. Moreover, the Cabinet can pass a resolution to dismiss the Board member from his office. Through these procedures, independence and autonomy of ministerial regulatory agency might be weakened due to political interference in appointment process and unfair dismissal. The regulator may not be able to exercise regulatory power without being undermined by short-term political interest. All in all, this could affect the credibility of regulatory system.

Financial autonomy and independence of regulator can be promoted if regulator has secure sources of funding. The Act allow the Office to earn revenue from the execution of authority and duties as assigned to the Regulator and the Office, from subsidy allocated by the government, from donation and from revenue from assets of the Office. However, any operational plan, expenditure budget, revenue estimation, and determination of fee rates and other benefits must be presented to the Minister for approval. Any requested subsidy must be presented by the Minister to the Cabinet for approval. Although the government does not have direct control over the regulator’s budget through the consolidated fund of the government, it can control and/or punish the non-

conforming regulator by disapproval of proposed budget, plan and fee.

“Accountability” of regulator will be challenged through appeal mechanism as stipulated in the Act. Energy consumer, licensee or any stakeholder, who is dissatisfied with an order issued by the Regulator, has the right to lodge an appeal with the “Regulator itself”. The decision of the Regulator will be treated as final. However, the Regulator is accountable to government. The Board member will be dismissed from his office on the ground of misconduct, negligence, dishonesty or incompetence. Hence, there are checks and balances to control regulator’s misconduct.

Regulatory process and practices

The Act allows “participation” from any to-be-affected persons, a group of persons or licensees to make representations to the Regulator through the hearing process established by the Regulator before making any decision or issuing any regulations, rules, announcements or codes that will affect them, such as tariff consideration and energy network system expansion plan, except for the case of emergency or exigency to maintain the energy security of country. However it is too early to conclude how much opinions expressed in the participatory process will be taken into account in the Regulator’s final decision.

The Act emphasizes on “transparency” issue by stipulating that any decisions or issuance of regulations, rules, announcements or codes and reasoning behind decisions shall be recorded and summarized into annual report of the Office and shall be disseminated through website of the Office. For example, Energy Network System licensees must disclose the contracts, agreements, conditions and tariffs to the utilization of or connection to their energy network systems. The formula or the methodology used in the tariff calculation and even the variables used in the tariff calculation, except that they are confidential information of the licensees, shall be disclosed. However, the major concern is the scope of transparency and area of information disclosure. The information utilized in the process of reaching any decisions or issuance of regulations, rules, announcements or codes should be disclosed as well.

Transparency is important basis for securing more effective participation from firms, consumers and affected community. It can ensure effective accountability and predictability.

“Predictability” is crucial for firms undertaking long-term investment. The Act attempts to set objective, guidelines, regulatory framework and regulation on licensing, tariff, energy network system, energy industry operation standards and equipment standards and energy consumer protection. However some of regulations do not provide the well grounded rules and empower the licensees to set rules such as energy network system and tariff determination. There is no promise that they might be subject to sudden change due to private interest of licensees.

6. POWER DEVELOPMENT FUND

The Act allows a fund to be set up to compensate those licensees who provide services to low-income consumers

or remote areas at prices below actual costs. Apparently, this is to be used as a tool to support the social objective of uniform tariffs and rural electrification. The Regulator is empowered to assign licensees to extend their services into areas where supply is still insufficient. Currently, uniform tariffs are achieved through a cross-subsidy between MEA and PEA. Arrangements are made for PEA to pay for bulk power from EGAT at rates lower than those paid by MEA, so that PEA can provide power to their customers at the same prices as those paid by MEA customers in Bangkok, Samutprakarn and Nonthaburi. Below-cost life-line rates are charged for all small household power users (not more than 150 kWh per month). To continue the uniform tariff policy under the new law, this so-called Power Development Fund is likely to replace the existing cross-subsidization scheme among EGAT, PEA, and MEA. This means that a surcharge is to be collected from MEA customers into the Fund, and at the same time a subsidy is distributed out of the Fund to PEA consumers. If the cross-subsidy is to be made transparent, contributions (both positive and negative) to the Fund must be specifically identified in electricity bills.

The Fund can also be used in financing development projects in areas affected by power generation. This is apparently aimed at reducing tensions between power plants and nearby community, making it easier to locate power plants in the future. Another purpose of the Fund is to promote the use of renewable energy and environment-friendly technologies in electricity operation.

It is expected that most contribution into the Fund is collected from licensees, who most probably pass the burden over to their customers. The fines collected from the licensees who fail to comply with the Act are also to be added to the Fund. The Act specifies that a subsidy from the government is another source of revenue for the Fund. But based on past experience, this source has the least likelihood. In terms of administration, the Fund is to be managed by the Office as an account clearly separated from its regular budget. Decisions on the contribution and expenditure of the Fund will be made by the Regulator within the policy framework of NEPC.

7. CONSUMER PROTECTION AND ENVIRONMENTAL CONCERN

Concerning consumer protection, the Act requires licensees to meet the technical, engineering, and service quality standards set by the Regulator. In case they fail to meet the standards, they have to compensate the affected customers. Standard service contracts approved by the Regulator must be publicly displayed and used to ensure fair treatment for all energy consumers.

Following the English model, the Regulator shall appoint a consumer committee representing energy consumers in each region, the extent of which will be determined by the Regulator. This 10-person committee receives and considers complaints from energy consumers, and co-ordinate with service providers to seek remedy for consumer problems. It also gives advice to consumers and the Regulator on consumer protection issues. Besides lodging complaints to their regional committees, consumers also have the right to directly request and receive information from their service providers in cases

of billing errors or other unfair treatments. If they are not satisfied with their committee's decision, they can forward their appeals to the Regulator.

At present, NEPC has set some technical standards, and customer service standards (both overall and guaranteed) for MEA and PEA to follow. For instance, planned outages must be publicly announced at least 3 days in advance, and at least 90% of complaints/questions from MEA customers must be responded within 30 days by mail, and 10 minutes by phone. The effectiveness of enforcing these standards has yet to be evaluated, and it is unlikely that most customers have been informed of their rights in obtaining these service qualities. Therefore, if the consumer protection system outlined in the Act really works, we can expect that at least more consumers will be aware of these rights and some will start to exercise them.

On environment issues, the Act does not give specific details on how the impact of energy activities on the environment will be minimized. However, one of the objectives of the Act and the duties of the Regulator is to promote the use of renewable energy and other energy sources with minimal impact on the environment. Environmental standards are also one of the criteria to be adopted by the Regulator in granting a license to an operator. And as explained in the previous section, part of the Power Development Fund can be spent to encourage the use of renewable energy and clean technologies in power generation.

8. CONCLUDING REMARKS

The attempt to reform Thai energy sector in three facets: ownership, structural and regulatory reforms has started for a decade. However, the progress of these reforms has been slow due to various factors such as protest on privatization of energy SOEs and lack of clear legal basis and steps for regulatory and industry structural reform.

To pursue reforms more effectively, energy law is needed. In Thailand the energy law was drafted for few times since 1998 but was not yet successfully enacted for various social and political reasons. In 2006 the attempt to draft energy law was revived again. By the time of writing, this Energy Industry Act is expected to be passed by the National Legislative Assembly by the end of 2007.

The Act will consolidate the laws relating to ESI and natural gas transmission network with the objectives of promoting competition and private participation in the energy sector, and establishing an independent, transparent, and accountable energy regulator as well as new regulatory framework.

The Act has an almost complete set of necessary features to achieve the aforementioned objectives. It is drafted to centralize regulatory tasks under the newly established regulatory body and to create a certain degree of regulatory governance. Moreover, it also introduces a new concept of Power Development Fund to pursue the uniform tariff policy. However, the Act does not stipulate a clear design for energy industry structural reform in the future. Therefore, the objective of promoting competition in the energy industry may not be fully achieved.

REFERENCES

- [1] Jamasb, T., 2006. Between the state and market: Electricity sector reform in developing countries. *Utilities Policy* 14:14-30.
- [2] Levy, B. and Spiller, P.T. 1994. The institutional foundations of regulatory commitment: a comparative analysis of telecommunications regulation. *Journal of Law Economics and Organization* 10(2):201-246.
- [3] Stern, J. and Holder, S. 1999. Regulatory governance: criteria for assessing the performance of regulatory systems: An application to infrastructure industries in the developing countries of Asia. *Utilities Policy* 8:33-50.