This is a post-peer review version of an article published in the *International Journal of Economic Policy in Emerging Economies* and available in final form at: https://doi.org/10.1504/IJEPEE.2018.094523

Wisuttisak, P., & Rahim, M. (2018). ASEAN energy sector under public-private partnership: challenge for market governance. *International Journal Of Economic Policy In Emerging Economies*, *11*(4), 312. doi: 10.1504/ijepee.2018.094523.

Users are reminded that the article is protected by copyright. Users may download and save a local copy of an article accessed via RUNE for personal reference. For permission to reuse a journal article, please follow the instructions given at:

https://www.inderscience.com/mobile/inauthors/index.php?pid=74#entitlement

Downloaded from rune@une.edu.au, the institutional research repository of the University of New England at Armidale, NSW Australia.

ASEAN Energy Sector under Public–Private Partnership: Challenge for Market Governance

Pornchai Wisuttisak* (Corresponding Author)

Lecturer at Faculty of Law, Chiang Mai University, Thailand

PhD in Business Law and Taxation, University of New South Wales, Australia

Master of Commercial Law, Macquarie University, Australia

BA Political Science, Thammasat University, Thailand

Email: pornchai.w@cmu.ac.th

Mia Mahmudur Rahim

Senior Lecturer at School of Law, University of South Australia

PhD in Law, Macquarie University, Australia

Master in Public Administration, the National University of Singapore

Master in International Economic Law, University of Warwick, UK

LLM and LLB with Honours, University of Dhaka

Email: mia.rahim@unisa.edu.au

This paper is a revised and shortened version of a paper entitled 'The PPPs in ASEAN: Challenge on market governance under competition law and policy' presented at the SIBR-RDINRRU 2015 (Osaka) Conference on Interdisciplinary Business and Economics Research, July 2nd–3rd, 2015, Osaka, Japan

ASEAN Energy Sector under Public–Private Partnership: Challenge for Market Governance

Abstract: The paper explicates the rising role of Private–Public Partnerships (PPPs) in the ASEAN energy sector. PPPs are an important factor in this sector, as such partnerships have stimulated the decreasing roles of state enterprises, and raised some complicated issues regarding the convergence of the roles of state-owned enterprises and PPPs in this sector. This paper elaborates these issues and highlights the progress in the energy sector governance in ASEAN countries. It suggests some ideas and plans for managing PPPs, the market power held by the SOEs, and the competition law and policy for the ASEAN energy sector.

Key words: PPPs, competition law and policy, ASEAN, infrastructure sectors

Introduction

The increasing role of PPPs in the ASEAN region helps transform the energy infrastructure towards competitive markets because PPPs are capable of reconstructing the market structure and disciplining the market (monopoly) power of state enterprises (SOEs). Nevertheless, the increase of PPPs in the ASEAN energy sector can also contribute to the difficulties of the market. This is because PPPs, in some cases, become dominant entities and begin to control the energy market instead of SOEs. PPPs, thus, also create difficulties as regards market governance in the ASEAN energy sector. This, then, proves to be a challenging concern for the ASEAN energy sector. The aim of this paper is to explicate this concern.

The paper is divided into five parts. The first part focuses on the impact of the increase in PPPs on the market power of SOEs in the ASEAN energy sector. The second part explores how the increase in PPPs facilitates towards or obstructs market governance with regard to market competition in the ASEAN energy sector. In the third part, it provides some suggestions on development plans for market governance under increasing PPPs in the ASEAN energy sector. The last part concludes the paper.

1. PPPs on market power of SOEs in ASEAN energy sector

1.1 PPPs and reduction of monopoly role of SOEs in energy sector

The increase in PPPs in the ASEAN energy sector creates a significant impact on the monopoly role of SOEs. The implementation of PPPs in the energy sector brings about a vital change in the energy sector because of the fact that the implementation liberalises the energy market and opens up the competition to new private competitors. SOEs, which had always had monopoly privileges in terms of controlling and running the energy sector, found that their roles were reduced to being only market participants and that they had to compete with private enterprises in delivering infrastructure services in the ASEAN region. Aldaba and

Pasadilla (2010) point out that PPPs are increasingly replacing state enterprises in monopoly roles in the infrastructure market because there are changes in the regulatory environment and contractual requirements for open market to public–private partnerships schemes in the energy service (Aldaba and Pasadilla 2010), p. 26). This observation is similar to the report from the Indonesian government and the Islamic Development Bank, pointing to the trend that the ASEAN infrastructures which were previously under SOEs are currently under significant market transformation towards more market competition (Indonesia Ministry of Economic Affairs 2010, Iqbal and Suleman 2010). The market transformation suggests that the role of SOEs in infrastructure is fading away and being replaced by PPPs and market competition (Indonesia Ministry of Economic Affairs 2010).

1.2 PPPs — market competition and reduction of SOEs in energy sector

In order to demonstrate the change in the monopoly power of SOEs in the ASEAN energy sector, the paper chooses to explore some private investments in the ASEAN energy sector. Private investments now have greater roles in reducing the monopoly roles of SOEs in ASEAN countries such as Lao PDR, Malaysia and the Philippines.

Lao PDR. Lao PDR's electricity sector mostly relies on private investment. Private investments control and operate the electricity grid in the various cities of Laos where there is lack of effective electricity connection (ASEAN-German Mini Hydro Project 2010). In the report from the World Bank, it is mentioned that the government of Laos depends on private investments to be the active operators serving off-grid electricity to 6,000 of Laos' rural households (Worldbank 2008). In addition, the private sector helps the Laos government in matters such as electricity generation, grid and networks. Approximately 54 percent of the country's electricity generation is by private operators, while the government agency — Electricité du Laos — accounts for 44.6 percent of the electricity generation (Phongsavath 2007). The private sector also participates in the development of huge hydro dam projects in Laos which transmit the electricity generated to Thailand and Vietnam. An example is the Nam Theun 2 hydroelectric project (NT2) which was established with the help of private and government investment so as to generate electricity for supply to Laos and Thailand (NTPC 2010). Also, the Theun-Hinboun Power Company Ltd as a public–private cooperation is operating a hydropower plant in Laos (THPC 2010). Thus, the private sector is an important player in electricity operation and development of the electricity infrastructure in Laos.

Malaysia. The electricity sector of Malaysia is controlled by Tenaga Nasional Berhad (Tenaga), a privatised electricity company (Tenaga Nasional Berhad 2011). The Tenaga is under a sharing of investments between public and private sectors (Tenaga Nasional Berhad 2011). It thus eased the Malaysian government by enabling it to move away from its direct role of dominant enterprises and allowing private investment in the electricity sector. The monopoly role of the state enterprise in Malaysia electricity is, thus, replaced by the PPP which is under co-sharing of ownership between the public sector and the private sector. In addition, private investments are directed to investment-independent electricity generators. Private independent electricity generators are entities that co-operate with Tenaga to generate and supply electricity in Malaysia. Independent electricity generators such as Malakoff and SKS Power are the main private electricity producers that collaborate with Tenaga to build electricity plants in order to supply electricity to Tenaga's grid (Rector 2005). Thus, the electricity sector in Malaysia is under increasing private investment so as to help the SOEs cater to the rising electricity demand in Malaysia (APERC 2006).

The Philippines. Private investments increasingly become the main source of investment for electricity operations. After the financial crisis in the 1980s, the electricity supply was liberalised and private investments were permitted to operate in the electricity sector because the Philippine government was going through financial difficulties. The SOEs could not manage their investment to meet the demand for electricity consumption, and that caused electricity brownout issues (Austria 1999). By market liberalisation, that is, private investment, the Philippine government and state-owned enterprises were able to ease the electricity supply shortage by way of having an increased number of private entities in electricity generation (Worldbank 1994). The private entities in operating their electricity utilities increased their market role and reduced the dominant role of the SOEs, National Power Corporation (NPC). The private electricity generator gained significant market shares in power generation and distribution; private generators account for 30 percent of electricity generation, and the distribution is almost wholly owned by private enterprises (Woodhouse 2005).

From the above cases of private participation in energy infrastructure, it can be seen that the ASEAN countries are at the edge of transformation, with the SOEs' role of monopoly in the electricity sector becoming that of a collaborator with the private sector. This means that the SOEs are gradually being replaced by market orientation based on private investments under PPP. The PPP scheme in energy electricity is thus seen as a vital mechanism in the creation of market liberalisation and competition in the ASEAN energy sector. By way of PPP, the corporate sector would be able to participate in various energy projects in ASEAN which will stimulate competition in the energy market, thus paving the way for the development of the ASEAN infrastructure sector. The market competition would then improve the market condition in the ASEAN energy sector. The market competition would then lead to an increase in the pace of market integration in the ASEAN energy sector because market competition help reduce market barriers from SOEs' monopoly power in the ASEAN energy sector (Wisuttisak 2014).

2. PPPs assist or obstruct market governance in energy sector

From the above part of paper, it is evident that the rise of PPPs helps to reduce the monopoly role of SOEs and that this can create development as regards market competition in the ASEAN energy sector. Nevertheless, the rise of the PPPs may pose some issues of anticompetitive condition when the PPPs are energy operators that occupy dominant market power instead of SOEs. The same would then contribute to concern for market governance regarding development and competition in the ASEAN energy sector.

2.1 Granting PPP projects in energy sector

In granting PPP projects in ASEAN, there is a possibility of collusive bidding, and this tends to occur when private investors and government maintain a close relationship. This means that an increase in PPP projects in the ASEAN energy sector can lead to an anticompetitive condition by their patronage relationships which conducted bid rigging in PPP projects. There are example cases in Thailand and the Philippines.

Thailand. There are issues of collusion in granting PPPs in infrastructure projects where the Thai crony corporations have gained control in politics in order to obtain concessions and economic restrictions in infrastructure services (Tantikulananta 2009). The crony

corporations involve themselves in politics, are able to conduct bidding collusions, and patronise relationships (Tantikulananta 2009). In the Thai telecommunication sector, business groups are able to influence the government in shaping telecommunication liberalisation and privatisation policies (McCargo and Pathmanand 2005). By this, the crony corporations were able to create the cartel behaviour under government favour, which prevented the sector from enjoying fair competition (Tejapira 2002, Pye and Schaffar 2008). The example from Thai Telecommunication relates well with the Thai energy sector where the government and the crony corporations were then attempting to keep the Thai energy sector under oligopoly control. In a study on Thai Electricity, Wisuttisak (2012) points out that the Electricity Authority of Thailand (EGAT) as the monopoly generation supplier is able to legally collude with Independent Power Producers (IPPs) in controlling the supply market. The EGAT as the sole electricity trader in Thailand is able to control the market with the main IPPs such as Ratchaburi Electricity Generating Holding Public Company Limited (RATCH) and Electricity Generating Company Public Company Limited (EGCO) (Wisuttisak 2012). There are also other IPPs, but they must trade their electricity generation with the EGAT. Thus, granting of any electricity trading contract with IPPs may involve collusion behaviour between the government which controls the EGAT and the IPPs as a private investment. In addition, the EGAT with its monopoly role and with the lack of liberalisation in the electricity market can choose to permit any private investment having a patronal relationship with it (Nikomborirak 2001, Nikomborirak 2002).

The Philippines. The anticompetitive condition in granting PPPs projects in the energy sector occurs when there is a patronal relationship between the government and the private investment which contributes to the collusion of privatisation of the infrastructure sectors (Tjiptoherijanto 2008). Various PPP projects under privatisation were implemented by providing high favour to private investment under associated conglomerates (Tjiptoherijanto 2008). The examples include the electricity sector in which the PPPs are granted collusive rigging between the government and private investments. Investigations were conducted on 35 independent powers producers (IPPs), and the investigation found that those IPP projects which permitted private investments to operate electricity were done through a close relationship between the government and the private conglomerates (Wu and Sulistiyanto 2006), p. 116). In addition, a major case of corruption was revealed in the granting of the PPP projects of the Caliraya-Botocan-Kalayaan hydroelectric power plant. In these cases, the private investor paid around $2 million in bribe to the Philippine government in order to procure the Build-Operate-Transfer (BOT) contract for the project of the Caliraya-Botocan-Kalayaan hydroelectric power plant (Kenny and Soreide 2008). The cases demonstrate the significant uncompetitive policy as regards PPPs projects in the Philippine energy sector, which is a cause for concern for other private investments which aim to competitively bid on energy projects in the Philippines.

From the above cases relating to collusive conduct between the government and the private sectors in PPPs in the ASEAN energy sector, it is evident that the matter is of great concern with regard to ASEAN energy market governance. The ASEAN and the countries in ASEAN may have to work on energy regulatory governance that would help in preventing collusive conduct as far as increase in PPP projects in the energy sector is concerned.

2.2 PPPs and market dominance

It is highly possible that PPPs in the ASEAN energy sector may acquire dominant market power and create concerns over market governance moving towards competition. The

example cases are from the Philippines and Thailand where PPPs enjoy both government and private support and are able to control the energy market. Under the ownership of both government and private entities, the PPPs would have dominant advantage in controlling the market as incumbents that operate and provide energy services to the consumers.

The Philippines. In this country, private investments increasingly collaborate with the government to exercise dominance with regard to market power in the utility sector. Although there is growth in investment in the Philippine infrastructure sector, there is also a rise in the anticompetitive condition when the government and private investments, under PPP schemes, coordinate to control the utility market (Bocchi 2008). The politically connected corporations enjoy government favour because of rules and regulations that maintain market barriers in the utility sector so as to ensure that the corporations can reap benefits from the sector (Bocchi 2008). Because of the focus on the energy sector, the market barrier in the electricity sector can lead to a rent benefit to government-connected companies. This deters market competition and cost efficiency in a broad range of investments in the Philippine electricity sector (Bocchi 2008). The structure made uncompetitive by rules and regulations also discourages new private investments from participating in the energy infrastructure. The new investments are shying away from the Philippine electricity sector because there exist politically connected domestic conglomerates which influence regulations and policies in the electricity sector (Trivedi 2013). Consequently, the only way for new private investments to invest in the Philippine energy sector is by relying on politically connected conglomerates which control the access to the Philippine energy sector.

Thailand. After the failure of the privatisation and liberalisation plan in electricity, the Electricity Generating Authority (EGAT) as a state enterprise still maintains its monopoly position, controlling the sector. Nevertheless, the EGAT with its control over two main IPPs is able to cartelise electricity prices which affect consumers' welfare. Because of the EGAT control with IPPs, there is lack of market competition with regard to making the cheapest possible electricity fares available to consumers (Wattana, Sharma et al. 2008). Normally, the electricity trading contracts are signed before the projects start, and the projected costs of the IPP projects are overestimated to cover risk (Wattana, Sharma et al. 2008). This is a common cartel practice among IPPs, which informally form a group to push up the contracted electricity price between themselves and the EGAT, which will translate to higher electricity fares to consumers (Wattana, Sharma et al. 2008). In the Thai gas sector, the Petroleum Authority of Thailand (PTT) was privatised and became a PPP enterprise owned by state and private investment. Before privatisation, the PTT was an SOEs monopoly company in the oil and gas sector. After privatisation and after private investments, the PTT become a monopoly company in the gas sector and a dominance entity in the oil sector. This, in turn, helped provide private investors with the opportunity to elicit profit through PTT without any market competition which would have been beneficial to consumers. In addition, PTT has monopoly control over gas pipelines (Chandler and Chapman 2011, Nikomborirak 2011) and is able to create duopoly in gas and electricity with the EGAT (Wisuttisak 2012). This is because the main source of EGAT's electricity generation is gas (Wisuttisak 2012). PTT, by controlling gas pipelines, is able to maintain the market barrier for competition in the gas sector. This appears to be an unfair market condition where the Thai gas sector is monopolised by PTT as the only PPP.

From the above cases, it is obvious that the growing concern for ASEAN is that the rise in the PPPs in the energy sector would go beyond the regulatory governance of the ASEAN countries. The dominant PPPs in the energy sector are expanding their control to various ASEAN countries. The example is the trans-ASEAN cross-border project in the energy sector

(Banomyong 2008, Carroll and Sovacool 2008, Bhattacharyay 2009). The projects of the ASEAN power grid connectivity (ASEAN 2007) and the Trans-ASEAN Gas Pipeline (ASEAN 2002) would lead to further cross-border control in the ASEAN energy sector. This creates issues of energy market governance in the ASEAN region. The PPPs with the dominance of market power can seek rent from the ASEAN consumers energy sector as well as deter new investments that aim to compete with them. The paper, therefore, suggests that regulatory governance for the ASEAN energy sector should be developed and implemented in order to cope with the issues of concern that arise from the rise in PPPs. The possible development is proposed in the next part of the paper.

3. Development plans for regulatory governance for increasing PPPs in ASEAN energy sector

As discussed above, although PPPs are important factors for development and reform in the ASEAN energy sector, PPPs can lead to anticompetitive circumstances which, in turn, would deter market competition and development in the energy sector. Therefore, PPPs are challenging issues for ASEAN energy governance. This is the reason why policy and regulatory governance must be transformed in order to catch up with the changing energy sector under PPPs. The paper, in this part, provides some short proposals as preliminary ideas for strengthening regulatory governance for ASEAN energy development under PPPs, at both the national and the regional levels.

3.1 Regulatory governance at national level

At the national level, the ASEAN member countries should reform their policies and regulations that create difficulty to new private investment in the market. Although there are some regulatory frameworks that permit private investment in the energy sector, the framework permits a limited number of private investments. What this paper suggests is that there should be refined regulatory governance which focuses on energy market reform in order to enhance the competition and the effectiveness of energy services. According to the study of Navarro and Sambodo (2013), national regulation is the main barrier to the pace of ASEAN market energy competition and integration. This is because in ASEAN member countries, the energy regulations tend to be selective on private investment. An example is the Philippines which imposed the regulatory requirement that foreign ownership may not exceed 40 percent (Navarro and Sambodo 2013). In addition, there is considerable requirement for electricity export and import into different countries, which then significantly favour the local private investment to take part in the electricity sector (Navarro and Sambodo 2013). Thus it is suggested that there should be reform with regard to regulations at the national level in order to create regulatory frameworks that stimulate competition and integration in ASEAN. With regulations undergoing reform, there would be competitive conditions that can increase foreign private investments, which would reduce the dominant roles of local private investment under the PPPs scheme (Sahu and Parekh 2012). The reforms may be on the following: (1) the regulation must be based on competitive-orientation, (2) the regulation should bring about effective restructuring that facilitates market competition and (3) the reform should be placed as a mechanism to sustain the competition in the markets (Wisuttisak 2013). In cases where there is regulatory reform at the national level, the challenging issues with respect to PPPs will be addressed and the competition and the integration of the ASEAN energy sector will be developed.

3.2 Regulatory governance at regional level

At the ASEAN regional level, the paper proposes that there should be development in regulatory harmonisation in ASEAN and institutional strengthening by the establishment of an ASEAN Energy Regulator. Harmonisation of energy regulatory regimes in the ASEAN member countries will create wider attraction to private investments, and it will help deal with the potential dominant power of PPPs in each of the ASEAN member countries. Harmonisation will also facilitate the pace of ASEAN energy integration as similar regulations in the ASEAN member countries can facilitate investment flow within the ASEAN energy sector. Harmonisation of regulations can be an important mechanism to stimulate all the ASEAN member countries to recognise the challenging issues vis-à-vis the increasing role of PPPs and to agree on the need to act regionally with reference to the changing ASEAN energy sector under increased PPPs.

In addition, apart from the regional harmonisation of regulations, it is necessary to strengthen those institutions that can deal with the rising issues in the ASEAN energy sector under PPPs. Although currently an ASEAN Energy Regulator Network has been established, the network is purely a forum for each of the member countries to negotiate for their own energy interest. The lack of a permanent and robust institution which can govern regional energy can contribute to a lack of institution which deals with issues of PPPs in ASEAN. In considering to building effective energy connectivity in ASEAN, the establishment of an ASEAN Energy Regulator is needed to build regulatory governance that will deal with broader regional issues, especially when there is national interest to protect the PPPs. The truth is that, in the absence of an ASEAN energy regulator, there is no institution that can directly govern open access to the essential facilities of oil, gas and electricity in ASEAN (Asia Pacific Review Trans-Asian Pipe 2003). The access is solely dependent on the interest of each of the ASEAN member countries. Also, a regional regulator is important for the governance of varying energy development in each of the member countries. The diversity in the gas, oil and electricity pricing structures in ASEAN must be managed by a unified institution in order to bring about sustainable energy market integration (IGU 2010). Thus, the paper points out that the ASEAN energy sector is in need of a regional energy regulator which can help deal with PPPs and national interests that deter market competition, market integration and market efficiency in the ASEAN energy sector.

4. Conclusion

The paper presents that PPPs have a significant impact on the market power of SOEs in the ASEAN energy sector. This is because the implementation of PPPs contributes to the opening up of the energy sector which was previously under the monopoly or dominant control market power of SOEs. PPPs tend to be a mechanism that restructures the closed energy market in ASEAN. However, the paper also highlights that PPPs can be a challenging concern for ASEAN energy governance due to the fact that an anticompetitive issue is involved in the process of granting PPPs and in the PPPs' dominant control over the energy sector. The concern is that PPPs tend to consist of politically connected businesses, and that this would lead to inefficiency in the ASEAN energy sector. Additionally, PPPs' dominant control over the energy market can lead to a rent-seeking business approach towards consumers in ASEAN. Given an account of these concerns, this paper proposes the

development of an effective regulatory governance both at the national and regional levels in ASEAN region. To this end, it suggest that the ASEAN countries should reform their regulatory strategies, so that their regulations can be more effective in raising competitions in the energy infrastructure development markets. At the regional level, it suggests that there should be harmonisation of legal regulations in order to motivate all the ASEAN member countries to realise the impact of the increasing role of PPPs and to coordinate on dealing with the changing market governance in the ASEAN energy sector. The paper also suggest for an establishment of a regional energy regulator who would have the duty to regionally govern ASEAN members' national interests and policies under the rising of PPP in the energy sector. These authors aims to conduct a thorough study in the near future on the framework of an energy regulator for the ASEAN region.

5. Reference

Aldaba, R. M. and G. O. Pasadilla (2010). The ASEAN Services Sector and the Growth Rebalancing Model, ADBI Working Paper Series No. 246.

APERC (2006). APEC Energy Demand and Supply Outlook 2006 Malaysia, Asia Pacific Energy Research Centre.

ASEAN-German Mini Hydro Project (2010). "Electric Power Situation in Lao PDR." from http://agmhp.aseanenergy.org/focus-countries/2009/05/30/electric-power-situation-in-lao-pdr.

ASEAN (2002). The ASEAN Memorandum of Understanding (MoU) on the Trans-ASEAN Gas Pipeline (TAGP), ASEAN.

ASEAN (2007). Memorandum of Understanding on the ASEAN Power Grid, ASEAN.

ASEAN (2010) BIMP-EAGA ROAD Map to development 2006-2010.

ASEAN (2010). "Press Release - ASEAN-China Investment Cooperation Fund for Infrastructure and Energy Launched." from http://www.aseansec.org/23633.htm.

ASEAN (2010). Promoting Fair Competition in ASEAN – Series of Forums on Competition Opens in Singapore, ASEAN.

ASEAN (2011). "ASEAN Competition Conference Promotes Competition Policy." from http://www.aseansec.org/26725.htm.

ASEAN (2011). ASEAN ICT Master Plan 2015, ASEAN.

ASEAN (2011). "Innovative Fund to Pave Way for Infrastructure Boom." from http://www.asean.org/26635.htm.

Asian Development Bank (2009). Infrastructure for a Seamless Asia, ADB.

Asian Development Bank (ADB) (2008). Public-Private Partnership (PPP) Handbook, ADB.

Asian Pacific Review Trans-Asian Pipe (2003), Building the Trans-Asean Gas Pipeline, Asian Pacific Review, July 2003: 15-20.

Austria, B. S. (1999). Development of the Energy Industry in the Philippines. Second Workshop on Economic Cooperation in Central Asia: Challenges and Opportunities in Energy, Manila, Philippines.

Banomyong, R. (2008). Logistics Development Study of the GMS North–South Economic Corridor, ADB.

BBC (13 April 2009). China offers funds to boost Asean, BBC.

Beh, L.-S. (2010). "Development and Distortion of Malaysian Public-Private Partnerships – Patronage, Privatised Profits and Pitfalls." Australian Journal of Public Administration **69**: S74-S84.

Benacchio, M. (2008). "Consolidation in the air transport sector and antitrust enforcement in Europe." European Journal of Transport and Infrastructure Research **8**(2).

Bhattacharyay, B. (2010). "Infrastructure for ASEAN Connectivity and Integration." ASEAN Economic Bulletin **27**(2): 200.

Bhattacharyay, B. N. (2009). Infrastructure Development for ASEAN Economic Integration, ADBI Working Paper Series No.138.

Bhattacharyay, B. N. (2010). Estimating Demand for Infrastructure in Energy, Transport, Telecommunications, Water and Sanitation in Asia and the Pacific: 2010-2020, ADBI Working Paper Series-No. 248.

Bocchi, A. M. (2008). Rising Growth, Declining Investment: The Puzzle of the Philippines, World Bank.

Carroll, T. and B. Sovacool (2008). Contested regionalism in Southeast Asia: the politics of the trans-ASEAN Gas Pipeline Project, Working paper 002-Centre on Asia and Globalisation.

Chandler, A. T. and S. Chapman (2011). Gas regulation-Thailand, Global Legal Group.

IGU - International Gas Union. (2010), The Trans-ASEAN Gas Pipeline – Accelerating Gas Market Integration within the ASEAN Region, from http://www.iapg.org.ar/WGC09/admin/archivosNew/Special%20Projects/3.%20IGU%20GMI%20Guidelines/3.%20IGU%20GMI%20Guidelines%20FINAL%20-%20CD%20contents/Transasean.pdf

Indonesia Ministry of Economic Affairs (2010). What Private Investors Should Know About Investing in Indonesia's Infrastructure, Ministry of Economic Affairs, Republic of Indonesia.

Iqbal, Z. and A. Suleman (2010). Indonesia: Critical Constraints to Infrastructure Development, Economic Research and Policy Department- Islamic Development Bank.

Kenny, C. and T. Soreide (2008). Grand Corruption in Utilities, World Bank Policy Research Working Paper No. 4805

McCargo, D. and U. Pathmanand (2005). The Thaksinization of Thailand. Copenhagen, NIAS Press.

Navarro A. M. and Sambodo,M. T., The Pathway to ASEAN Energy Market Integration, Philippine Institute for Development Studies, Discussion PaperNo. NO. 2013-49, http://dirp4.pids.gov.ph/webportal/CDN/PUBLICATIONS/pidsdps1349.pdf

Nikomborirak, D. (2001). State Owned Enterprises: The Last Bastion of Monopoly and the Greatest Challenge to Competition Authority. The Fifth APEC/PFP Course on Competition Policy, Bangkok, Thailand.

Nikomborirak, D. (2002). Thai Competition Law and Policy, World Bank - Building Constituency in Competition Law and Policy.

Nikomborirak, D. (2006). "The Political Economy Of Competition Law: The Case Of Thailand." Northwestern Journal of International Law & Business **26**(3): 597-618.

Nikomborirak, D. (2011). Gas in Thailand The Impacts and Benefits of Structural Reforms in Transport, Energy and Telecommunications Sectors. C. Findlay, APEC Policy Support Unit

NTPC (2010). "About- Nam Theun 2 Power Company (NTPC)." from http://www.namtheun2.com/.

Phongsavath, A. (2007). Rural Electrification SituationRural Situationin Lao PDRin PDR. CAP-REDEO meeting, Vientiane, Laos PDR, Capacity and institutional strengthening for Rural Electrification and development, Decentralised Energy Options.

Pye, O. and W. Schaffar (2008). "The 2006 anti-Thaksin movement in Thailand: An analysis " Journal of Contemporary Asia **38**(1).

Rector, J. (2005). The IPP Investment Experience in Malaysia. The Experience of Independent Power Producers in Developing Countries. Stanford University, Center for Environmental Science and Policy, Stanford University-Working Paper #37.

Sahu, S. and Parekh, K. (2012) Determinants of Economies of Scale and Their Influence on the Oil and Gas Services: A Discussion", Review of Integrative Business and Economics Research, 1(1), 245-258.

Tantikulananta, C. (2009). Government-business relations and ASEAN economic integration in the post financial crisis: a case study of Thailand. Australian Political Studies Association Annual Conference Macquarie Univeristy, Sydney.

Tejapira, K. (2002). "Post-Crisis Economic Impasse and Political Recovery in Thailand: The Resurgence of Economic Nationalism." Critical Asian Studies **34**(3): 323-356.

Tenaga Nasional Berhad (2011). "About Tenaga Nasional Berhad- History." from http://www.tnb.com.my/about-tnb/history.html#PrivateCompany.

THPC (2010). "Welcome to the Theun Hinboun Power Company." from http://www.thpclaos.com/.

Tjiptoherijanto, P. (2008). Civil Service Reform In the Philippines: The Role of Civil Society Quezon City, Philippines, The Nippon Foundation Dilliman.

Trivedi, A. (2013) No End in Sight to the Energy Crisis That Plagues the Philippines, Time, from http://world.time.com/2013/08/06/no-end-in-sight-to-the-energy-crisis-that-plagues-the-philippines/.

Wattana, S., et al. (2008). "Electricity Industry Reforms in Thailand: A Historical Review." GMSARN INTERNATIONAL JOURNAL **2**.

Wisuttisak, P. (2011). The ASEAN competition policy guidelines and its compatibility with ASEAN member countries competition law. 3rd Biennial Conference of Asian Society of International Law, Beijing, China.

Wisuttisak, P.,(2012) Regulation and competition issues in Thai electricity sector, Energy policy, Vol 44, Issue, 185-198

Wisuttisak, P., (2013) Competition Law and Sectoral Regulation in the Electricity Sector in Thailand: Current Problems, International Experience and Proposals for Reform, PhD thesis, Shool of Taxation and Business Law, Australian School of Business, University of New South Wales.

Wisuttisak, P.,(2014), EU competition law on electricity sector liberalization, International Journal of Public law and Policy, Vol 4 Issu 4, 336-351

Woodhouse, E. J. (2005). The IPP Experience in the Philippines. The Experience of Independent Power Producers in Developing Countries. Stanford University, Center for Environmental Science and Policy, Stanford University-Working Paper #37.

World Bank (1994). Philippines power sector study : structural framework for the power sector, World Bank -report no. 13313-PH.

World Bank (2008). Project Performance Assessment Report- Lao People Democratic Republic Southern Provicial Electricity Projects, The World Bank Report No.:42413.

Wu, X. and P. Sulistiyanto (2006). Independent power producers in Indonesia and the Philippines. Deregulation and Its discontents: rewriting the rules in Asia M. Ramesh and M. Howlett.