

Institutional processes and regulatory risk: A case study of the Thai energy sector

Darryl S. L. Jarvis

Lee Kuan Yew School of Public Policy, National University of Singapore, Singapore

Abstract

Infrastructure provision the world over has undergone a series of profound changes in the manner of its financing and governance over the last 30 years or so. While the role of the state has diminished as a direct provider, builder and operator of infrastructure, its role as regulator and overseer has undergone substantial growth, increasing the regulatory burden on the state. While this transition has occurred relatively smoothly in developed country contexts, in developing countries the diffusion of the regulatory state has produced manifestly different forms of governance, stressing the regulatory capacity of existing and newly formed regulatory bodies. This paper explores the impact and manifestations of regulatory diffusion in the context of the Thai energy sector and the governance mechanisms responsible for electricity generation, transmission and distribution.

Keywords: institutional endowment, institutions & regulation, regulatory risk, Thailand energy sector.

Introduction

In recent surveys of multinational firms, regulatory risk was rated “the greatest strategic challenge facing global business.”¹ Indeed, despite traditional risks associated with treasury operations, currency exposure, competition and operational risks, survey respondents overwhelmingly rated “political risk” as the greatest recurrent challenge to business continuity and profitability. We should, perhaps, not be surprised by this. If the spate of theorizing, voluminous academic literatures and empirical investigations about “governance” over the last two decades have taught us anything, it is this: institutions matter. Institutions frame the risk environment; institutional processes can generate, moderate and amplify risk, download compliance costs and otherwise define market extensity and the parameters that mediate economic, social and political interactions.

Beyond these observations, however, further insights are more difficult. Precisely what institutional features matter, what specific institutional variables are at play in risk generation, and in what magnitude and priority they relate to governance outcomes or regulatory systems, remains contested. This makes for a strange paradox; a near universal embrace of “good governance” as a key ingredient for economic growth, social welfare and optimal state-market outcomes, yet an inability to operationalise the concept in ways

Correspondence: Darryl S. L. Jarvis, Lee Kuan Yew School of Public Policy, National University of Singapore, Singapore. Email: darryl.jarvis@nus.edu.sg

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that make it transparent or readily transferable. Policy diffusion might be all around us and the transplantation of regulatory frameworks a feature of an emergent “regulatory capitalism” (Levi-Faur & Jordana 2005, p. 191), yet the sense in which such diffusion relates to the adoption, building and operation of institutions and the emergence of “good governance” remains elusive. As the Nobel laureate Douglas North noted recently, we perhaps know more about the surface of the moon than we do about the processes that lead to institutional formation, instantiation, institutional legitimacy, efficiency and probity, and their relationship to governance and regulatory systems.² Despite their importance, institutions remain enigmatic and the quest for “good governance” a highly prized but often unrealized goal.

These questions and the relationships that undergird them are increasingly important in an era that David Levi-Faur (2005) characterizes as “governance through regulation;” where the expanding neo-liberal agenda does not diminish the state’s role but transforms it, indeed increases its importance under the *modus operandi* of “regulatory capitalism” (see also Zhang & Thomas 2009, pp. 1–2). Increasing levels of private sector participation and an ever growing need to mobilize larger pools of private capital to fund infrastructure deployment – from roads, railways, information communications technologies (ICT) to energy and educational capacity – transforms the scope and role of government, often demanding more rather than less, or what Hood *et al.* (1999) describes as an “explosive growth in investment in oversight.” In developed economies this has produced contradictory tendencies; “leaner and meaner” government which, in the case of the United Kingdom, for example, saw a 25% reduction in the number of civil servants between 1976 and 1996 but, for the same period, a relative explosion in staffing levels in regulatory bodies, growing by over 90% (Hood *et al.* 1999, pp. 29–31; Levi-Faur 2005, p. 20).

In the UK as in other advanced economies this transformation has been relatively well accommodated. Highly evolved institutional capacities, long established procedural norms and practices, and deeply instantiated institutional legitimacy has allowed for effective governance adaptation. For theorists like Levi-Faur (2005), the conundrum that presents itself is thus little more than understanding the ubiquity of this process and how “regulatory diffusion” and policy transfer transform the mode of governance in various juridical settings. Other theorists similarly approach the rise of regulatory capitalism in ubiquitous terms, but defined by the diffusion of global regulatory standards and codes that create overreaching structures of regulation. Braithwaite and Drahos (2000, p. 3), for example, note the extent to which states outside of Europe and the US “have become rule-takers rather than rule-makers”, where the regulatory standards and codes evolved by international organizations or consortia of public and private interests witness a diffusion of these standards into national contexts. In Australia, for example, many of the air safety standards “have been written by the Boeing corporation . . . or . . . the US Federal Aviation Administration. Australia’s ship safety laws have been written by the International Maritime Organization . . . its motor vehicle safety standards by Working Party 29 of the Economic Commission for Europe and its food safety standards by the Codex Alimentarius Commission in Rome” (Braithwaite & Drahos 2000, p. 3). For such literatures, the conundrum of regulatory capitalism resides in the technocratic imposition of rules and the implications for democratic participation in rule formation; how these may advantage the interests of rule-makers, disadvantage rule takers, and the costs and issues associated with technical implementation of global standards, regulatory codes, and practices. For still other literatures, the rise of the regulatory state is approached in more technical

terms, focused upon regulatory design and the technical parameters of outcomes, costs, efficiencies, and optimality for sector participants (Jaffe & Stavins 2007; Strausz 2009).

Strangely absent from these literatures, however, are explicit attempts to theorize the institutional-regulatory nexus or examine it empirically. Institutions, while not ignored or theorized away, are simply assumed and their capacities, procedural systems, levels of instantiation, norms and practices, taken as given. Jordana *et al.* (Forthcoming, p. 9), for example, at various points conflate regulatory diffusion with institutional transplantation and adoption, neglecting issues of institutional capacity and the specific social and political contexts in which institutions are embedded – they are simply transplanted, capacities and all. Similarly, Levi-Faur (2005, p. 17; Levi-Faur & Jordana 2005), while noting that “regulatory capitalism sits quite comfortably” with neoinstitutionalist literatures, fails to make the linkage between institutional forms, institutional functionality and specificity, and the implications for the regulatory state in institutionally unique or impaired environments. There is, in effect, what Zhang and Thomas (2009, p. 331) describe as a “reality gap”, where best practice and the regulatory and institutional models evolved in developed country contexts produce a singular policy prism that ignores the “actual legal, administrative, political and economic processes that exist in low and middle income countries” (pp. 331–332). As they point out, the danger is that this leads to a “one size fits all” approach that when diffused into developing country contexts is likely to produce “perverse outcomes” or “fatal remedies.” Regulatory reform and the emergence of regulatory institutions in developing economies face “more and bigger difficulties than in developed countries,” but the precise dimensions these take and the consequences that evolve remain mostly under explored and little theorized (Zhang & Thomas 2009, pp. 331–332).

In this article, I suggest that the diffusion of the regulatory state and with it specific regulatory models and systems in developing country contexts, generate fundamentally different regulatory outcomes. Rather than a ubiquitous regulatory capitalism, variations in regulatory efficiency, differences in institutional endowments and the manner in which institutions are embedded in contested political and social domains, produces not only multifarious and unanticipated outcomes but often reductive oversight capacity. Further, I suggest that the unique institutional-regulatory interface that obtains in developing country contexts produces qualitatively different forms of regulatory risks, and, with them, a much wider and potentially more deleterious set of outcomes for both private sector participants and state interests.³

Theorizing regulatory risk

The purpose of economic regulation as Levy and Spiller (1994) famously remarked is to focus attention on the regulatory arrangements necessary to sustain private sector investment. Because of their unique characteristics, investments into utilities face a series of problems. Utilities, for example, are characterized by technologies that require large sunk investments into fixed infrastructure. The return on investment is largely captured by the requirements of economies of scale and scope, where the technology is unique because of the ubiquity of its distribution and consumption – we all demand access to electricity, water and telecommunications. Utilities investments also tend to be non-transferable. Utility assets have little value in alternative uses – they cannot be easily dug up and deployed to alternative sectors – and the exigencies of economies of density and network

externalities make it largely uneconomical to deploy multiple networks (Spiller 1996, p. 423). Investments into such sectors thus tend to be captured by the exigencies of the technology, their size, scope and non-transferability. As Levy and Spiller note, “what separates the utility sector from the rest of the economy is the combination of three features: specific investments, economies of scale and widespread domestic consumption” (Levy & Spiller 1994, pp. 202–204; see also Spiller 1996, p. 423; Stern & Holder 1999, pp. 37–38).

These characteristics create specific risks for investors into the utilities sector. First, they make the sector inherently political. The relatively ubiquitous consumption of utilities (e.g. electricity, water, communications), make the issue of tariffs, tariff adjustments and review, open to interest group and political pressures, while the state divestiture of assets through privatization and the pricing of utilities creates political agendas often accompanied by intensive political scrutiny. Second, because of economies of scale and scope, utilities investment and operation suffers from the “whiff of monopoly”, fueling interest group pressures and often the mobilization of political resources against operators (Levy & Spiller 1994, p. 424; Spiller & Tommasi 2005, pp. 517–520). Third, sunk investments into fixed infrastructure are exposed to the perils of what Raymond Vernon (1971) termed the “obsolescing bargain” problem, where the relative bargaining strength of the investor vis-à-vis the state declines post market entry. Once the investment is sunk, the problems of divestiture, tariff adjustment, the requirement for government approvals for market exit or transfer of ownership, increases the relative bargaining power of the state, enabling it to engage in rent seeking behavior or otherwise change the extensity of the market and impact investment returns (see Jarvis & Griffiths 2007). Fourth, the large transaction costs associated with market exit, divestiture of sunk assets and redeploying investments elsewhere, means that utilities operators will “often continue operating as long as operating revenues exceed operating costs”, effectively stranding the asset, generating stranded costs and depreciating the value of the sunk investment (Spiller 1996, pp. 423–424).

Regulation to the rescue?

Government opportunism and the tendency of political constituencies to demand economic concessions or rents remain the greatest disincentive to private sector participation in utilities and infrastructure provision (Jarvis & Griffiths 2007; ADB 2009, p. 124). For governments to mobilize private sector investment they thus need to construct credible institutional arrangements that constrain their opportunism and balance the obsolescing bargain problem. Regulation, regulatory theory and practice, thus arise from this dilemma, where the design and operation of a regulatory regime is meant to ameliorate political risk, constrain the opportunistic behavior of government, decrease uncertainties for the investor, and provide frameworks that set in place administrative procedures for review and revision due to changed circumstances, unforeseen externalities, and disputation.

Such frameworks have become an increasingly dominant feature of the regulatory landscape of developed economies since the spate of privatizations of state utilities commenced in the late 1970s. These produced a series of regulatory models with most coalescing around the implementation of independent regulators; key agencies charged with oversight, administration, compliance, licensing, review and due process as electricity sectors where unbundled and private sector participation encouraged. Indeed, such

regulatory systems became the preferred model of multilateral development banks and were identified as a key means of mobilizing private sector investment into resource poor countries and accelerating infrastructure provision. Throughout the 1980s and 1990s, countries in Latin America and Asia thus adopted a series of pro-market policies in utilities provision, commencing reforms in the sector by allowing the establishment of independent power producers (IPPs) and in many cases adopting variations on the regulatory models that had sprung up in Europe – notably the United Kingdom (Stern & Holder 1999, pp. 33–35).

It would be wrong, however, to assume that the adoption of such regulatory frameworks in developing country contexts has mitigated the risks of opportunism, political risk, or the problems of creeping expropriation through rent seeking behavior (Bergara *et al.* 1997, p. 16; Dassler 2006). Constraining government opportunism and political risk is a function of both the regulatory regime and the institutional environment. Not all institutions are created equal and the manner of these variations creates a regulatory-institutional mix that lies at the heart of what we might term *regulatory risk*. Without effective institutions the *credibility* of the regulatory regime is degraded,

Levy and Spiller (1994) suggest the nexus of this regulatory-institutional mix can be divided analytically into two categories: *regulatory governance* and *regulatory incentives*. Regulatory incentives refer to the formal rules (often contractual) stipulating utility pricing, tariffs, subsidies, public service delivery and quality obligations, and associated economic costs and returns. As they correctly observe, “the structure of regulatory incentives has been the central preoccupation of virtually all theoretical work on regulation.” As they further note and as this study will contend, “such an emphasis is inadequate” (p. 205). Regulatory incentives are not advanced in an institutional vacuum; incentives are meaningless absent a credible commitment and the institutional means to extract these. Rather, this comprises the realm of *regulatory governance* defined as the “mechanisms that societies use to constrain regulatory discretion and to resolve conflicts that arise in relation to these constraints” (Levy & Spiller 1994, p. 205).

The choice of mechanisms available to societies, however, are themselves constrained by the “specific institutional endowment of the nation” (North 1990). These comprise its socio-political attributes; the means by which representation, rules, judicial process, informal norms and customs, and the constellation of social forces and administrative capabilities, impact, constrain, and enable institutional commitments (North 1990; Levy & Spiller 1994, p. 206). In other words, the institutional endowment “both determines the form and severity of the regulatory problems and shapes the range of options available for resolving them” (Levy & Spiller 1994, p. 205). Variations in the effectiveness of regulatory governance and the credibility of regulatory commitments thus derive from variations in the institutional endowment.

Regulatory risk

Policy diffusion and transplantation of regulatory models into diverse institutional endowments can thus be expected to generate dissimilar regulatory outcomes and variations in regulatory governance. These variations lie at the heart of our notion of regulatory risk, where variations in the quality of regulatory design, regulatory tools, and regulatory institutions may generate a series of risks that detract from or degrade the credibility of the regulatory commitment (see also Hénisz 2002). These risks can arise at various points in the regulatory process. For example, the regulatory design can be flawed

or imperfect, comprised of inadequate formalization of the rules, rule contradiction, poor rule clarity or confusion. The tools associated with regulatory incentives may be mispriced, inappropriately or poorly administrated, subject to manipulation, or otherwise poorly calibrated to balance public and private interests. The institutions associated with regulatory governance may be ineffectual or impaired, where the principles that undergird good governance (transparency & information symmetries, stakeholder participation, accountability and redress mechanisms, autonomy), are absent, unavailable or poorly practiced (see Spiller & Tommasi 2005, pp. 524–529).

The combination of such attributes is endless (Correa 2007; Dixit *et al.* 2007, p. 7; Nakhouda *et al.* 2007, p. 8). The point is that the presence of any contributes to a degradation of regulatory credibility, producing various regulatory risks that impact predictability and certainty in the sector, due process, and the right of redress (Globberman & Shapiro 2002; CEPA 2005, pp. 20–25; Bertelli & Whitford 2009). Regulatory risk can thus manifest in countless forms; for example, the inability of the regulator to enforce rules and defend public and private interests; contestation over rule ownership leading to policy or rule making paralysis, confusion, or rule instability; regulatory implementation deficits creating governance gaps, inconsistency and lack of predictability, among many others.

Efforts to redress the extent of regulatory risks have thus invariably focused on bolstering the institutional endowment by engineering the degree to which proxy attributes of regulatory governance are present and practiced in regulatory institutions. The degree of transparency, the mode and practices via which information is shared, the method and manner of stakeholder engagement and participatory practices in regulatory processes, the means by which accountability principles are enshrined, and the degree to which institutional autonomy is balanced against regulatory discretion to protect against regulatory capture or political interference are all now standard measures of the governance capacity of regulatory regimes and, in turn, the extent to which they are impaired or absent serve as broad indicators of regulatory risk (see also Strausz 2009, p. 2).

This paper explores these issues in relation to the institutional endowment of the energy sector in Thailand; specifically, the electricity generation, transmission and distribution sector. Like many developing economies, Thailand has evolved an energy policy reflecting its desires to increase its energy security and lessen its dependence on external energy sources while rapidly deploying energy infrastructure to facilitate economic development. Part of this process has involved the imposition of new regulatory frameworks, largely adopted from models developed in the UK. Thailand thus represents an instance of regulatory diffusion of specific regulatory models but in a developing country context where institutional processes are evolving and where institutional endowments and capacities remain truncated.

The paper is organized into two sections. The first surveys the Thai electricity sector, addressing the evolution of the regulatory regime governing the up-stream (generating) and downstream (distribution/transmission) sectors and the governance outcomes produced by an impaired and still pre-formative institutional environment. In essence, this section outlines the institutional endowment in which the Thai energy sector initially evolved but, more importantly, the legacy this set in place and into which reform efforts and an independent regulator have emerged. The second section turns to address the outcomes of this institutional endowment vis-à-vis the interplay of historical legacies and newly evolved regulators, using the standard metrics of transparency, stakeholder engagement processes and systems of accountability as a means of understanding how specific

institutional-regulatory contexts generate unintended regulatory outcomes and regulatory risk. As the paper attempts to demonstrate, the interplay between the historical endowments of Thailand's institutional environment and the emergence of new regulatory institutions creates an institutional – regulatory mix that, far from guaranteeing the success of the reform process and effective regulation, creates new tensions and political dynamics whose outcomes make regulatory governance problematic.

Critical to my analysis have been the perspectives gathered through fieldwork and interviews conducted with regulators and private sector participants in the Thai energy sector. Where requested, the identity of interview subjects has been protected.⁴

The Thai electricity sector

Historical background

Electricity is a political commodity in Thailand. Electrification, roll out of generating and transmission infrastructure, and consumer and industrial access to electricity is intimately associated with the developmental plans and ambitions of the Thai state and its people (Williams & Dubash 2004). Indeed, growth in the demand for electricity, increasing annually by 10% from the mid-1980s, has been a leading indicator of the country's rapid development as Thailand moved into energy-intensive industrialization in petrochemicals, manufacturing, steel and cement production, and expansion of upstream refinery capacity (Woo 2005, p. 3). At the same time, rapid urbanization and favorable pricing policies made electricity comparatively inexpensive, promoting electricity energy substitution and a further expansion in generating capacity (Wattana *et al.* 2008, p. 43). While the Asian financial crisis witnessed significant reductions in electricity demand in line with a contraction in economic activity, since 2001 growth in demand has returned, expanding annually between 3-7% and on 24 April 2007, achieving a record peak power demand indicative of continuing energy-intensive industrialization (EGAT 2008, p. 7).⁵

The importance of electricity to Thailand's economic development has historically made for a strong state presence in the electricity sector, with three government-owned enterprises dominating power generation and distribution since the late 1960s: the Electricity Generating Authority of Thailand (EGAT), the Metropolitan Electricity Authority (MEA), and the Provincial Electricity Authority (PEA) (see Table 1). EGAT's inception in

Table 1 Thailand's electricity sector: 1968–1992

Utility	Inception	Mandate and functions
EGAT	1968	Sole agency responsible for electricity generation and transmission in Thailand; central planning of national electricity development; pricing and tariffs; direct power and electricity distribution to a few, key large consumers
MEA	1958	Responsible for distribution and all retail service functions (connections, meters, billing, maintenance) in key metropolitan areas such as Bangkok, Nonthaburi and Samut Prakan
PEA	1960	Distribution responsibilities for all other (predominantly rural) areas outside of Bangkok, Nonthaburi and Samut Prakan

Source: Woo (2005, p. 5); EPPO, Energy Sector Management in Thailand, p. 15.

1968 represented a decade-long process of vertical integration, with the government merging several state-owned regional generating authorities to form a “sole agency responsible for generation and transmission of electricity to the entire nation” (Wattana *et al.* 2008, p. 44). Indeed, the creation of EGAT is itself a reflection of earlier forms of policy diffusion, with the World Bank and USAID strongly endorsing a single independent power agency as a condition for loans to finance infrastructure roll out.⁶ The result was a triangulated and vertically integrated electricity sector, whose central role in powering Thailand’s industrialization made the three power utilities not only politically strong but in effect self-regulating apart from financial requirements set by the Ministry of Finance (Wattana *et al.* 2008, p. 48; Greacen & Greacen 2004; Williams & Dubash 2004, p. 519).

The institutional legacy this set in place should not be understated. By default, EGAT enjoyed a monopoly that constructed a series of powerful dynamics, vested interests, and control over substantial resources. Reform of any kind, whether in the modes of regulatory governance or attempts at creating stand alone oversight agencies beyond the reporting mechanisms required at its inception, would henceforth invariably be seen as threats to these interests and likely incur the resistance of EGAT. By championing strong state agencies as the primary vehicles for electrification, EGAT became aligned with the domestic objectives of industrialization and economic growth, allowing it to enjoy prime place in the institutional fabric of Thai society.

Early reform efforts in the Thai electricity sector: 1980–1989

The rapid deployment of electricity capacity via centralized agencies like EGAT proved both highly successful and costly for Thailand.⁷ Much of the capacity roll out was financed by external loans, with EGAT, MEA and PEA responsible for nearly half of all of Thailand’s external borrowing between 1967 and 1971 (and as much as 37% between 1972–1976). Thailand’s power utilities thus entered the energy crises of 1974 and 1979 with heavy debt burdens and a reliance on imported oil (required for electricity generation). The result was a tripling of the nation’s external energy bill between 1979 and 1981 and a blow out in national debt, reaching 39% of GDP (Greacen & Greacen 2004, p. 520; Wattana *et al.* 2008, pp. 44–45).

By the early 1980s, state-led development through external financing thus became problematic, and in the case of electricity, highly politicized. Electricity prices rose dramatically off the back of higher energy costs and debt servicing, increasing 259% between 1979 and 1982. Political pressure to maintain low electricity tariffs and facilitate greater access to electricity among Thailand’s rural and urban poor created contradictory pressures to appease domestic constituencies and set artificially low tariffs while attempting to address the rising debt burden of the utilities. In the face of burgeoning public debt Thailand was forced to seek emergency assistance from the International Monetary Fund (IMF) (in 1981, 1982, and 1985) and negotiate a series of conditional structural adjustment loans (SALs) from the World Bank. Part of the loan conditions required price increases for electricity and the privatization of state-owned enterprises in order to increase private sector participation and thus reduce public sector debt (Greacen & Greacen 2004, p. 520; Chaivongvilan *et al.* 2008, p. 56).

By 1988 the government’s “White Paper on Enterprises” recommended the privatization of 41 of Thailand’s 61 state-owned enterprises (by 2001). EGAT was classified a “Class A state Enterprise” and earmarked for privatization through a three track process: first, partial privatization of EGAT through equitization and forced divestiture; second,

the introduction of new industry players via the sale of EGAT's up-stream generating assets; and third, the procurement of power from privately operated independent power producers (IPP) (Woo 2005, p. 6).

Despite emergent ideational change among domestic coalitions, in particular an increasingly vocal and influential Thai middle class and a pro-democracy movement generally aligned with the interests of privatization or, at least, greater public accountability and transparency, the first efforts to privatize the utilities and liberalize tariffs failed. Labour unions, consumer groups, Thai nationalists and academics created a powerful coalition that, in conjunction with EGAT's vested interest in preserving the status-quo, succeeded in thwarting privatization initiatives. Disbanding such an embedded institutional arrangement as provided by EGAT, or the sense that alternative ownership models could or would produce superior outcomes in terms of tariff reductions, greater efficiencies or enhanced public service delivery, essentially misunderstood the deeply intertwined relationship between Thailand's rapid industrialization and relative poverty reduction, and the role that state agencies like EGAT were seen to have played in this process.

By the end of the decade, EGAT thus continued to enjoy a monopoly but with mounting external debt and expanding infrastructure obligations. Thailand's explosive economic growth throughout the 1980s, for example, tripled electricity demand and resulted in electricity shortages and "brownouts", threatening the country's continued industrialization. EGAT was forced to roll out greater generating and transmission capacity amounting to over US\$1 billion annually by the end of the 1980s, again mostly financed through concessional bi-lateral loans. By 1989–1990, EGAT's fiscal position was thus precarious, with some 57% of its annual operating budget forced to be set aside to service its foreign debt obligations (US\$1.168 billion in fiscal year 1989–1990) (Greacen & Greacen 2004, p. 520; Wattana *et al.* 2008, pp. 45–46).

The diffusion of privatization in the Thai electricity sector, 1990–1999

Thailand's continued economic success in the early 1990s only exacerbated electricity capacity issues. Between 1985 and 1995, for example, Thailand was the world's fastest growing economy, with real GDP expanding annually by 8.4% (Greacen & Greacen 2004, p. 521). With mounting generating capacity and transmission requirements EGAT's financing arrangements became increasingly problematic. By the early 1990s, the World Bank had put in place new electricity infrastructure lending policies, setting down conditions stipulating the establishment of market-based regulatory regimes, the commercialization and corporatization of electricity sector agencies, and liberalization of the sector to facilitate foreign ownership and greater private sector participation (World Bank 1993). As Wattana (*et al.* 2008, p. 45) notes, "the continuing pressures coming from international financial agencies in parallel with the rapid rise of electricity demand created a situation which saw private investment the best alternative." At the same time, the successive administrations of prime ministers Chatchai (1988–1991), Anand (1991–1992) and Chuan (1992–1994) commenced an extended period of pro-market reforms that would ultimately come to reconfigure the policy architecture and regulatory regime governing electricity.

The initial cluster of reforms, however, were tentative and essentially worked around the thorny issue of an entirely new regulatory regime or radically new ownership structure in the face of still powerful institutional legacies that constrained political options.

Some of these reforms had commenced previously with the creation of the National Energy Policy Office (NEPO) in 1986 and formed as a secretariat to the National Energy Policy Council (NEPC) which reported directly to the Prime Minister's office. NEPO was headed by the influential and politically powerful Dr Piyasvasti Amranand (1986–2002) with NEPO essentially driving energy policy in Thailand through the NEPC. Under Piyasvasti, NEPO became a strong proponent of market rationalism and privatization, lobbying the Prime Minister and cabinet for reform in the electricity sector as a means of addressing EGAT's precarious debt position (Greacen & Greacen 2004, p. 523; *Electricity Governance in Thailand 2006*). Its invigorated role under the 1992 National Energy Policy Council Act, essentially made NEPO the most influential energy body in the country, assuming significant powers over all facets of energy policy, planning, and pricing.⁸ In quick succession, NEPO secured technical assistance from the World Bank to assist in the privatization of the electricity sector and supported passage of amendments to the EGAT Act (1992), allowing private power producers (PPP) to enter the upstream generating sector.

Two PPP's subsequently came on line; the first in May 1992 with the formation of the "Electricity Generating Company Limited" (EGCO), and the second in March 2000 with the formation of the "Ratchaburi Electricity Generating Holding Public Company." Both were initially formed as wholly owned subsidiaries of EGAT. Both EGCO and Ratchaburi would be floated on the Stock Exchange of Thailand (SET), raise funds via their initial public offering (IPO), tap capital markets and then purchase generating plants from EGAT as part of a forced divestiture. By breaking EGAT's monopoly on power generation and creating market competition in up-stream generation, the reforms aimed to lower generation costs and stem the tide of tariff increases under EGAT.

Outcomes

Thailand's first foray into electricity privatization produced contradictory outcomes. Far from perfect competition, EGAT retained significant interests in both EGCO and Ratchaburi. As recently as 2005–2006, for example, EGAT retains a 25% stake in EGCO and a 45% interest in Ratchaburi. As the sole purchaser of power from EGCO and Ratchaburi, EGAT's interests are conflicted. It retains a commercial interest in the profitability of EGCO and Ratchaburi and an ability to pass on supplier costs to end consumers. By one account, for example, EGAT pays as much as 20% more for power from EGCO than from other private producers (Greacen & Greacen 2004, p. 523). This incentivizes collusion and the prospects of agreed cost structures rather than competition with incentives to lower costs. As Woo (2005, pp. 6–7) observes, rather than competition "there is an informal agreement between . . . [the] . . . companies not to directly compete for the acquisition of assets" that even extends to setting out "their prospective spheres of influence for investment in neighboring countries." More obviously, the nature of the power purchase agreements (PPAs) between EGAT, EGCO and Ratchaburi utilized a "take or pay" contract, protecting PPPs from demand variations and downloading excess capacity risks to EGAT and in turn Thai consumers.

Most glaring, however, was the failure to develop new regulatory oversight authorities or innovate regulatory capacity concomitantly with privatization roll out. EGAT retained a powerful role in the government structure and for all practical purposes enjoyed self-regulation. EGAT's reporting and accountability mechanisms, for example, amounted to little more than the preparation of annual accounts to the Ministry of

Finance, with sensitive or commercial in-confidence agreements with PPPs remaining undisclosed. Privatization was essentially occurring in a regulatory vacuum, absent accountability, oversight, compliance and enforcement mechanisms surrounding competition, pricing, private sector participation or consumer protection. Privatization was itself seen as a form of regulatory innovation but absent institutional developments to administer the commercial parameters of this new environment. As far as NEPO were concerned, privatization would bring its own rewards – the institutional innovations could come later (Sirasoontorn 2005, p. 3). The introduction of formal rules governing regulatory incentives or the instigation of new institutions to effect regulatory governance were thus strangely absent amid what was otherwise championed as energy sector reform.

The instigation of a series of IPPs while signaling some degree of liberalization in the upstream generating sector in Thailand also demonstrated how constrained by institutional legacies were the reform efforts of Piyasvasti and NEPO. Much of the “reform” that occurred was confined to the policy realm, where political leaders accepted the need for private sector participation in generation but generally shunned the broader and politically more challenging tasks of erecting new institutional arrangements or embarking on regulatory innovation. The institutional legacies which had seen resources and authority for electricity provision centralized in the hands of EGAT, essentially constrained the options available to reform minded bureaucrats or political elites, leaving EAGT relatively untouched if not commercially benefiting from the instigation of IPPs. More importantly, the failure to effect meaningful reform in the modes of regulatory governance left reform-minded constituencies without non-political mechanisms to break down EGAT’s “black box” operating mentality.

There was, however, one significant outcome of these efforts: control over Thailand’s electricity policy had been firmly placed in the hands of the Thai bureaucracy. EGAT would no longer be the sole repository of electricity knowledge, policy or planning.

Privatization amid regulatory opacity: The introduction of IPPs

The absence of a robust regulatory context defines much of Thailand’s subsequent reform efforts in the electricity sector. The second track of privatization commenced in December, 1992, for example, saw the introduction of independent power producer (IPP) and small power producer (SPP) programs, designed to attract private foreign investment to build, own, and operate large and small scale power plants, enhancing generating capacity while reducing public expenditure commitments.⁹ As before, IPPs and SPPs would enter into power purchase agreements (PPAs) with EGAT, the sole purchaser of electricity. Seven IPP concessions were granted in 1994–1995 to supply 6345 megawatts (MWs) with commercial operating dates commencing between 1999 and 2003 (Woo 2005, p. 7).

While the bidding process for IPP licenses was competitive, there was no regulatory mechanism in place to oversee governance in the sector in terms of the mediation of competitive pressures down the value chain to consumers and tariff prices. PPAs negotiated between the IPPs and EGAT, for example, operated on the basis of a regulated returns environment, guaranteeing returns on the basis of estimated IPP costs at the time of the granting of the concession. Any efficiency gains through technical innovation or lower operating costs were retained by the IPP (Sirasoontorn 2005; Wattana *et al.* 2008, p. 47). Similarly, oversight of the sector and the commercial practices of the IPPs and

EAGT's fell to NEPO and NEPC, who, as Sirasootorn (2005) observes, were not regulators *per se* but architects of the policy environment with no surveillance, enforcement, or compliance capacities or mandated obligations in this regard. For investors in the IPPs, the absence of a formal system of regulatory oversight exposed them to the perils of a single purchaser (EGAT) relationship, changes in the policy preferences and agendas flowing from NEPO, and possible changing political coalitions driving energy policy at the Cabinet level via the NEPC. Rather than a consistent regulatory environment, Thailand's energy policy existed outside of an institutionally instantiated process defined by formal processes for review, stakeholder engagement and innovation. Regulatory governance in a sense was entirely absent, with energy policy contained in a highly circumscribed institutional setting, NEPO, and otherwise captured by an energy Czar, Piyasvasti. As went the political winds of change, so would go NEPO, Piyasvasti, and Thailand's electricity privatization agenda.

Winds of change in the Thai electricity sector: Policy & political instability, 2000–2006

After the Asian financial crisis (1997), the Thai government drew up and approved a "Master Plan for State Sector Reform" in line with the letter of intent presented to the IMF as part of Thailand's bailout package (Electricity Governance in Thailand 2006, p. 10).¹⁰ The Master Plan outlined the "basic guidelines, principles, practices and time frames for privatization plans, legal, regulatory and institutional changes" (Sirasootorn & Quiggin 2007, p. 403; see also NEPO 1999, p. 7). The plan called for the full privatization of the electricity sector similar to the "power pool model" adopted in the UK. In essence, the sector would be "unbundled", separating out the generating, transmission and distribution sectors. At the generation end, EGAT's generating assets would be split into three separate generation companies, privatized and sold off. Each of these generating companies would then compete in a "power pool" selling power on a spot market where supply and demand would determine spot prices for electricity. EGAT would be morphed into a transmission company and retain sole national transmission rights and responsibilities. MEA and PEA, in the meantime, would each be split up into regulated electricity delivery companies and compete in the retail market. The power pool would commence functioning in 2003, instigating a period of competition in the electricity sector at both the wholesale and retail ends with EGAT solely responsible for transmission activities (EPPO 2000). Concomitantly, the government would move to appoint an independent and all-powerful regulator similar to the UK model (Office of the Gas and Electricity Markets, UK) whose mandate would be to regulate competitive activities in the wholesale sector, oversee the natural monopoly created in the transmission sector by regulating transmission charges to IPPs, as well as regulate the limited competition expected to emerge in the retail distribution sector (World Bank 1999; EPPO 2000; Sirasootorn 2005, p. 3; Electricity Governance in Thailand 2006, p. 9).¹¹

While strongly supported by the Chuan administration (1997–2001) as an effort to meet not only its obligations to the IMF but fundamentally transform the electricity sector and address the precarious financial status of EGAT, the reform agenda was widely unpopular. EGAT opposed the reform initiative: EGAT unions feared job losses, Thai nationalists felt it would lead to the takeover of national assets by foreign interests, consumers feared it would increase power prices or lead to the advent of privatized monopolies, and the Thai press feared corruption or favoritism in the privatization

process (Sirasoontorn 2005, p. 3; Electricity Governance in Thailand 2006, p. 9).¹² In the wake of the fallout and severe economic dislocation caused by the Asian financial crisis (1997–1998), popular sentiment in Thailand was increasingly suspicious of still further reform championed by international organizations or the value of imported foreign models. The Chuan government's reform efforts thus became increasingly imperiled, indeed used by the populist politician, Thaksin Shinawatra, in his election bid to become Prime Minister (Electricity Governance in Thailand 2006, pp. 9–10).

Soon after its election, the Thaksin administration (2001–2006) abandoned the power pool model. Behind this move lay a broader political agenda that aimed to transform state owned enterprises into strategic entities that would fuel Thailand's subsequent growth and propel the country out from underneath IMF loan obligations and a languishing economy. Instead, Thaksin moved to create a "register of capable state enterprises as public companies." These companies would be incorporated, floated on the SET, stimulating investment in the still languishing Thai equity market and, in the process, generating significant financial resources that could be directed into needed expenditure programs (pay down of IMF loans, for example). Thaksin's aims were simple: turn SOEs like EGAT into "national champions." The move was a populist one which had the veneer of keeping Thai assets in Thai hands by imposing foreign equity ceilings or ownership limits (partial privatization) while also addressing a privatization agenda with the aim of improving competition and sector efficiencies (see Greacen & Greacen 2004, p. 527; Chirarattananon & Nirukkanaporn 2006; also Jarvis 2002).

Most significant in the energy sector, however, was Thaksin's restructuring of the formal institutional mechanisms for energy governance. Soon after his election, Thaksin transferred the energy czar, Piyasvasti, out of NEPO and subsequently established a new Ministry of Energy (MOE) in 2002, renaming NEPO the Energy Policy and Planning Office (EPPO 1997).¹³ Under these new governance arrangements, electricity policy making roles were relocated directly into the Ministry, with EPPO downgraded and reporting to the Energy permanent secretary rather than to the Minister or cabinet. In doing so, the political clout of EPPO (compared to NEPO) was diminished, with energy policy now firmly controlled inside the executive and subject to direct political considerations.

These changes benefited EGAT, allowing it to emerge as a "national champion" and, in the process, able to exert increasing influence over the MOE and to position itself strategically inside the reform debate. The new political climate called for strong Thai companies, "champions" that would promote Thai enterprise and compete successfully against foreign companies. Thai nationalism latched on to Thai SOEs as potential saviors against foreign ownership and resentment toward organizations like the IMF and their perceived roll in the economic hardships Thailand had been forced to endure. As a result, EGAT enjoyed political support from the Thaksin administration which it leveraged to help guide reform of the electricity sector. The appointment of the Boston Consulting Group (BCG) in 2003 to prepare a new National Energy Strategy by the MOE, for example, was welcomed by EGAT who enjoyed a long standing relationship with the consulting house. In turn, the defacto advisory role that EGAT played in the subsequent recommendations prepared by BCG and adopted by the Thaksin administration, enabled EGAT to preserve much of the status quo.

The recommendations of the new National Energy Strategy called for the implementation of an Enhanced Single Buyer (ESB) model. The model deviated little from previ-

ously recommended models. EGAT would be privatized, preserve its monopoly over transmission and compete directly with IPPs in the generating sector. PEA and MEA would be corporatized and compete in the retail market. Finally, the ESB model called for the creation of a robust independent regulator with clearly defined rules, powers and resources in order to ensure enhanced competition and address monopolistic practices (EGAT 2008). The policy was to be implemented by 2004.

Despite Thaksin's popularity, the privatization of EGAT proved politically difficult. Public hearings, union concerns and the increasing mobilization of civil society groups created a strong political constituency opposed to EGAT privatization (Foran 2006, p. 40; Thomas *et al.* 2009, p. 27). In particular, the September 2005 decision by the Thaksin administration to restructure and at the same time increase electricity tariffs, created a popular backlash. While the Thaksin administration sought to increase EGAT's revenues, improving its debt-to-equity ratio and thus share price when it listed on the SET, civil society and consumer groups thought the changed tariff structures unjustified and feared that the benefits of privatization would not accrue to Thai consumers (Electricity Governance in Thailand 2006, p. 13). There were also fears that the privatization process was not impartial and that those sitting on the privatization committee would perhaps improperly benefit from the privatization of EGAT. Despite attempts to appease opposition groups by announcing a freezing of the tariff regime for 3 years, the Confederation of Consumer Organizations submitted a petition to the Supreme Administrative Court to suspend EGAT's share offering. Subsequently, the Supreme Administrative Court ruled in favor of the petition, noting conflict of interest among members of the privatization committee and ordering a suspension of the share issue on 17 November 2005. The royal decrees allowing the privatization of EGAT were subsequently cancelled (Chaivongvilan *et al.* 2008; Sirasontorn 2008, pp. 56–57).

Regulatory diffusion: The Emergence of the Energy Regulatory Commission, 2007

The story of Thailand's electricity reform efforts does not end with the premiership of Thaksin. They were, however, abruptly interrupted by the military coup (September 2006) and the political machinations leading to the reinstatement of democracy in December 2007. Ironically, despite 14 years of reform efforts it was amid the relative chaos of the post-coup period that legislators finally approved the creation of a regulatory regime with the adoption of the Energy Industry Act (December 2007). A new era had arrived in Thailand's energy sector.

The adoption of a formal regulatory model and with it an attempt to create a system of regulatory governance was a milestone in the evolution of Thailand's approach to energy sector governance. In part, this abrupt about face was a culmination of several factors. First, the abandonment of the "national champion" model as a result of Thaksin's forced departure deprived EGAT of the political patronage it had previously enjoyed. The circuits of influence and political relations that stood EGAT in a relatively strong position vis-à-vis the reform agenda and boarder political attitudes toward the composition of the electricity sector had been abruptly interrupted. Indeed, the repudiation of the Thaksin administration reflected a strong political constituency that had mobilized against corruption and patronage, in the process marginalizing those individuals and entities that had been seen to be aligned with Thaksin and his political agenda.

Second, and perhaps ironically, the privatization agenda while largely usurped because of fears over corruption, conflicts of interest and due process, did not halt the allied reform agenda associated with the instigation of regulatory oversight in the sector and calls for greater accountability and transparency. Popular suspicions that cozy deals, patronage, and vested interests had driven the sector at the expense of greater efficiencies and the national interest created a political terrain that even the likes of EGAT was unable to resist.

Third, the importance of the energy sector (electricity, gas and oil) had been increasingly elevated by rising energy costs, concerns about energy security, and the sense that Thailand's energy resources should be managed for the national benefit. In part, a combination of civil society groups, popular sentiment favoring transparency and accountability, and the sense that mismanagement of the energy sector would have implications for national economic development proved an unstoppable tide of opinion that culminated in the adoption of the Energy Industry Act.

The Energy Industry Act created a single regulatory body, the Energy Regulatory Commission (ERC). Modeled on the UK's Office of the Gas and Electricity Markets, ERC's mandate is wide and varied. It includes the following (ERC 2008; interview with ERC Chairman, Mr Lavansiri and Commissioners, ERC, Bangkok, 26 January 2009):

- input and review of Thailand's national energy policy
- input and review of the Power Development Plan (historically the exclusive preserve of EGAT)
- review and comment on the investment plans of the electricity industry, the national gas procurement plan and the energy network system expansion plans
- development and implementation of customer service standards
- development and oversight of service provision standards
- surveillance, inspection and oversight of licensees in the upstream generation, transmission and distribution sectors
- development of regulatory codes and standards pertaining to industry operators
- establishment of stakeholder engagement processes and procedures
- development of conflict of interest guidelines for ERC board members
- development of regulations and criteria for financial contributions, disbursements and administration of the "Energy Fund"
- oversight authority in respect of IPP and PPAs
- development of regulations and engineering safety standards in respect of industry operation and the certification of equipment/devices
- oversight and development of energy consumer protection protocols, including the appointment and operation of a "Regional Energy Consumer Committees" (RECC's)¹⁴
- oversight and review of electricity tariffs and applications for tariff adjustment, including the development of a "methodology" for tariff calculation
- oversight and responsibility for the security and reliability of the power system
- responsibility for promoting competitive practices in the industry.

Despite what appears far sweeping regulatory reform it would be wrong, however, to view this as a break with the past or, indeed, the instigation of a regulatory regime that is uncontested. Rather, the ERC has been inserted into a highly political terrain and is forced

to operate astride a series of institutional legacies and in a political climate that is far from stable. This has implications for the type of regulatory governance regime the ERC might reasonably be expected to evolve. Indeed, it speaks to the constraints of an institutional endowment that makes problematic the ability to overcome uncertainty, provide credible regulatory commitments or erect effective regulatory governance mechanisms mediated through transparency, accountability, and autonomy.

The Metrics of Regulatory Governance: Transparency, Accountability and Autonomy in Embedded Institutional Endowments – The Case of the ERC

Thailand's institutional endowment is a contested domain of finely balanced social forces that position around the monarchy. They include the military, a strong and growing middle class predominantly located in Bangkok, an intellectual class focused around Bangkok's universities, an extremely wealthy but small elite whose diverse holdings in intermediate industries and agri-business has benefited from the country's rapid industrialization, and a large rural population consisting of mainly poor farmers and agricultural workers. The institutional fabric of Thai society makes for a series of cleavages that have often broken down, with the Kingdom reverting to military coups on numerous occasions. Not surprisingly, amid this highly contested political landscape the sense in which forms of regulatory governance are able to emerge is not just a matter of institutional development and the establishment of formal rules, but a much more problematic series of issues around institution building, institutional instantiation, balancing social forces and interests, and constructing mechanisms of governance virtually from the ground up.

Evidence of how problematic is this process can be seen since the inception of the ERC itself. The adoption of the Energy Industry Act (2007), for example, should not necessarily be interpreted as a vote of support for the ERC or its mandate. Successive post-coup administrations under Samak Sundaravej, Somchai Wongsawat, Chaovarat Chanweerakul, and Abhisit Vejjajiva between 29 January 2008 and 17 December 2008 were not immediately or strongly supportive of the establishment of an independent regulator (interview with Dr Piyasvasti Amranand, former chairman of NEPO, Bangkok, November 2008).¹⁵ The passage of the Energy Industry Act can thus equally be explained in the context of Thailand's continuing political machinations and political realignment in the post-coup era. As one commentator close to the ERC noted, the weakness of successive administrations, their need to carry core constituencies coupled with weakened executive authority in determining the legislative agenda probably allowed the Energy Industry Act to pass where previously vested interests would have delayed or modified it (interview, January 2009). Evidence in support of this interpretation is not hard to find. Throughout 2008, for example, the Thai Cabinet was lukewarm to the ERC and seemingly adopted a go slow attitude, delaying approval of the ERC's budget and announcement of Commissioner salaries, in effect putting the ERC on hold during its first year of operation (interview, ERC Commissioners, Bangkok, November 2008).

It is in this broader political climate and amid an institutional endowment that suffers from continuing social cleavages, unresolved political machinations and underdeveloped administrative capacity that the ERC is forced to operate and evolve effective regulatory governance in the energy sector. Clearly, such legacies place a series of constraints on the operating environment of the ERC which, combined with its own endowments and capacity, provides insights into how effective attempts to development regulatory governance will likely be. I examine each of these attributes briefly.

Autonomy

Autonomy is an important attribute for effective regulatory governance. It signals that political or special interest capture of the regulator is not possible and that the regulator will likely act in accordance with the regulatory principles of its mandate. Without autonomy, the credibility of the regulatory commitment is diminished.

The extent to which the ERC is autonomous, will enjoy fiscal autonomy over its budget and be able to control resources necessary to discharge its mandate, remains problematic. Historically, Thai governments have not been well disposed to stand alone statutory agencies since they represent lost revenue streams. Prior to the creation of the ERC, for example, the MOE enjoyed a windfall from operator fees of Baht THB100 million (approximately US\$2 million) per license. This now falls to the ERC whose income from license fees is estimated to be between Baht THB500 to 600 million annually (approximately US\$16 million) (interview, ERC Commissioners, 26 January 2009). Yet, in its first full year of operation (2008), the ERC was only able to issue interim operating licenses due to the failure of cabinet to approve full licensing autonomy, curtailing the ERC's budget revenues and capacity development in its first year of operation. Such irritants likely point to future contests between the ERC and future administrations. Under the current Energy Industry Act (2007), for example, the Minister for Energy and cabinet have ultimate approval authority over the ERC's budget expenditure including its operational plan and, under section 40 of the Act, the ERC is notionally required to return excess revenues above operational costs to the Ministry of Finance (Energy Industry Act, 2007: Section 9-8; Part 2, Section 40). The full intent of these clauses and how they might be interpreted and applied remains to be seen; what is obvious, however, is the interpretative space this leaves successive administrations to challenge the fiscal autonomy of the ERC and in the process its autonomy as a statutory regulator. Without budget autonomy and guaranteed revenue ownership, the prognosis for the ERC establishing its autonomy will be problematic (interview with Dr Piyasvasti Amranand, former chairman of NEPO, November 2008).¹⁶

There are also broader concerns about the level of autonomy the ERC will enjoy. Cabinet approval for the issue of regulations, for example, is required under the Act as are public hearings before regulations can be proclaimed (interview, Dr Pallapa Ruangrong, ERC Commissioner, ERC, Bangkok, November 2008). Further, in the discharge of its mandated duties to review and set tariff structures, it is unclear where the lines of authority are drawn. Ostensibly these lie with the ERC, but when interviewed ERC commissioners indicated that the tariff review process was governed by guidelines issued by the NEPC, MOE and prevailing government policy, and that stakeholders like EGAT had significant interests as well. When asked about authority spheres and rule ownership, for example, the Chairman and ERC Commissioners suggested these still had to be worked out; that the ERC was still in its early stages of development (interview, ERC, Bangkok, 26 January 2008).

These blurred lines of authority are also evident in the consultative and bespoke relationships between the ERC, MOE, and EPPO and how each relates to the other in the operation of the regulatory regime. The process of policy review of the national energy plan, historically the preserve of NEPC and EGAT in terms of its "future demand models", will not likely be ceded by either organization easily, suggesting that the ERC might act more as a commentator than serious player in energy policy, compromising its ability to oversee energy security, quality of service delivery and energy security. Similarly, its ability

to act as an impartial broker in tariff adjustment cases requires cross-institutional cooperation, information symmetries between commercial operators, EGAT, and NEPC, and political non-interference by the Minister for Energy and cabinet in what have historically been highly contested political decisions. While stipulated in the Act and thus notionally within the authority domain of the ERC, operationalizing the policy mechanisms that instantiate the ERC's role in energy policy, tariff adjustment, or the issuance of licenses, thus far remains undefined and unaddressed.¹⁷ When asked, for example, how the ERC will inject itself into this policy space, establish its presence and effect inter-agency cooperation and policy coordination, ERC commissioners were only able to refer back to the black letter law of the Energy Industry Act, highlighting the fact that administrative norms or considerations about the broader project of instantiating the institution to ensure its regulatory effectiveness have not been considered. As the ERC Commissioners noted, they are currently focused on more tangible operational issues: construction of a mission and vision statement, getting the web page up and running, and developing capacity (interview with ERC Commissioners and Chairman, ERC, Bangkok, 26 January 2009). While the ERC's inception is thus a positive step forward, the highly contested and fluid nature of governance in Thailand's energy sector presupposes that this is still a sphere open to future contestation, where the authority, legitimacy and regulatory effectiveness of the ERC remain in doubt.

Regulatory capacity

This gap between the creation of a regulator and its ability to regulate is perhaps the most obvious example of how problematic the institutional-regulatory nexus is in developing country contexts. Regulatory diffusion pen ultimately hangs on regulatory capacity (see especially Stern 2000). As Gasmi (*et al.* 2009, p. 2), observes, the fundamental role of liberalization and of regulatory reform has been to "redesign the legal and regulatory frameworks so as to induce 'proper' economic incentives . . . namely, incentives for operators to enhance their offerings . . . cost efficiency, quality of service, and tariffs." For developed countries this has essentially involved a modernization "of an already existing fabric of institutions with a complex system of operating rules built over a long history of political and economic administration of market economies" (Gasmi *et al.* 2009, p. 2). In developing country contexts, the question of institutional design or the diffusion of regulatory models, presupposes a much more complex set of issues that range from administrative capacity to human skill capacity (Stern 2000, pp. 135–137).

Thailand's ERC is a case in point. After 15 months of operation, its administrative and regulatory function remains rudimentary. The breadth and scope of its mandate, for example, requires high capacity surveillance over market functions, the deployment of compliance and enforcement mechanisms, sophisticated analytical systems in the case of review and input to the Energy Master Plan, tariff adjustment claims, economic and social impact assessment, roll out of a host of regulatory standards, the development of an extensive network of representative regional offices, oversight and administration of the collection and disbursement of revenues to the "Power Development Fund", among other technical programs and oversight responsibilities.¹⁸ In all, the ERC will require nine administrative departments to oversee all of its regulatory functions.¹⁹

The mandate is obviously extensive, yet the available capacity to meet these regulatory obligations is still formative. The organization is currently resourced with thirty staff, mostly non-technical administrative personnel, with ERC leadership provided by six

full-time commissioners and a chairperson. The absence of personnel with technical ability in regulatory administration in the industry is notable, with the ERC currently negotiating the transfer of 10 staff from EPPO to help provide technical capacity to the organization (interview, ERC commissioners, 26 January 2009, Bangkok, Thailand).²⁰ Attracting and retaining technical and high capacity personnel, however, is a problem. While the ERC will be able to offer salaries twice those of public service pay rates, these still fall far short of remuneration standards available in the industry itself. There is thus little prospect for attracting candidates with industry experience or of preventing talent transfer to industry operators in the longer term. Most telling, however, is the “map” to which the ERC commissioners are working in terms of developing ERC’s capacity. The ERC’s organizational structure, operational goals and organizational needs appear to be mostly defined by external, private sector consultancies (notably the Boston Consulting Group and PriceWaterhouseCoopers) with little internal input into the adequacy of the targets, their impact or utility to the organization’s structure, functions and operation. Indeed, the fact that PwC has been retained and appears to be the lead agency in the strategy and roll out of the ERC’s capacity development is itself an indication of the paucity of internal capacity the ERC faces. Without adequate capacity, how the ERC will be able to manage and adjust accurately the regulatory incentive structure, effectively balance public and private interests, determine and price regulatory instruments appropriately, or set in place the appropriate regulatory tools remains problematic.

Transparency & accountability

These capacity issues also impact the regulatory functions of the ERC in other less immediate ways. The diffusion of regulatory governance principles surrounding accountability, transparency and stakeholder engagement processes, for example, articulate in vastly different ways in countries where the institutional endowment is impaired or less developed. While the ERC have nominally adopted transparency and accountability principles as part of its legislated mandate in the Energy Industry Act (2007), the interpretation and intended practices surrounding these reveal highly perfunctory outcomes. ERC Commissioners, for example, indicated that the organization would be transparent through its web page, but “sensitive information” would be excluded. What the parameters were for the listing or exclusion of information appeared to be at the discretion of the ERC Chairman and Commissioners. Transparency in the ERC context simply amounts to selected information being placed on its web page, with little appreciation that principles surrounding transparency might also extend to decision making processes, making transparent information sources, the analytical assumptions, tools, and methods used for decision making, and disclosing the consultative processes and information inputs and representations made by industry operators and other stakeholders.²¹

These same issues emerged with the notion of accountability, with the ERC Commissioners indicating they were accountable to the Minister for Energy and the cabinet and that once a year the ERC would present its budget to the Ministry of Finance. Yet the commissioners struggled to identify the mechanisms of accountability, emphasizing that the most important compliance requirement they had was annual budget reporting and a parliamentary tabling of the ERCs annual activities – none of which had yet occurred (interview, ERC Commissioners, 26 January 2009, Bangkok, Thailand). ERC Commissioners also indicated they were accountable to their stakeholders, consumers and

industry operators, but through what administrative mechanisms or engagement systems the Commissioners failed to identify.

Principles of transparency and accountability thus appear to articulate as purely perfunctory compliance obligations rather than being approached as regulatory tools that can further regulatory governance and performance through establishing the regulator's legitimacy or increasing industry understanding of the regulator's processes, decision making systems, and objectives.

Stakeholder participation

Such attitudes were also evident in terms of stakeholder engagement processes, an otherwise critical tool for mediating conflicting sectional interests, constructing credible commitments, and legitimating the ERC and its regulatory authority. Indeed, actively involving stakeholders in the regulatory process is frequently cited as one of the most important elements for instantiating regulatory legitimacy, increasing information symmetries between regulators and regulatees, compliance outcomes, and reducing regulatory risk through mediation and long-lead time signaling of regulatory changes (ADB 1995; Stern 1997; Cubbin 2005; Spiller & Tommasi 2005). Yet the ERC's approach to stakeholder engagement was defined almost exclusively by its desire to defuse civil society and consumer advocacy groups opposed to tariff adjustment applications (ERC 2008; Lavansiri 2008; interview, ERC commissioners, 26 January 2009, Bangkok, Thailand). Stakeholder engagement appeared to be confused with public relations and the management of vocal groups. More obviously, the only mechanism identified for stakeholder engagement was "public hearings." The sense in which stakeholder engagement might involve active participation of stakeholders in internal decision making, energy planning and the regulatory process was alien.

These issues are not purely academic for newly emerged regulators like the ERC. The adoption of a largely UK based model and its infusion into the governance space of the energy sector in Thailand, holds potentially large risks absent a robust institutional base and strong administrative tradition on which to found it. The continuance of strong industry players like EGAT, for example, and the institutionalized monopolies it continues to enjoy in the transmission sector and over price determination for transmission rates, make for resilient practices that will be difficult to modify. Adding the ERC to this mix does not necessarily suppose the diffusion of a regulatory governance regime so much as the addition of another institutional player in an already highly contested and vexed governance environment. The establishment of the ERC is thus but a first step in a still highly fluid environment, the outcomes of which have yet to effect systems of regulatory governance in ways that lessen uncertainty, provide for greater predictability, or are able to instantiate regulatory credibility.

Regulatory risk in contested environments

The history of reform efforts in the Thai energy sector betray the perils of institution building in developing country contexts. Regulatory and policy diffusion into environments where the institutional endowment is fragile and where rule making and authority structures are contested makes for inherent instability. Thailand's experiences bear this out. The policy environment has ebbed and flowed from one set of proposals and operating policies to another, held hostage to the whims of changing political coalitions,

the vested interests of key players like EGAT, and key personalities inside agencies like NEPO. The result has been policy contestation, with energy policy increasingly politicized if only because of the lack of formal institutional forums/mechanisms to mediate competing social forces. As a result, the political arena has been the obvious and most productive environment in which to prosecute interests and influence energy policy. Indeed, for political elites, such a contested policy environment has made for highly motivated constituencies able to be mobilized and used to bolster political ends.

The risks that arise from this, however, have been all too obvious: the increasing politicization of energy policy debates, the use of litigious and juridical processes to adjudicate disputes and decide policy outcomes, and attempts by coalitions to capture policy processes and disenfranchise competing interests. In such a vexed environment, the policy outcomes adopted have been viewed as illegitimate, imposed and unrepresentative of broader interests, in turn fueling further policy contestation or policy gridlock.

The creation of the ERC and the instigation of a formal regulatory regime should, under normal circumstances, go a considerable way to mitigating regulatory risk and balancing these contending social forces. However, as the findings of this article suggest, the ERC's ability to ensconce itself amid a highly contested environment and discharge its regulatory functions cannot be assumed. The impaired institutional base, porous administrative traditions, and capacity issues it faces may well end up not ameliorating regulatory risks but contributing to them through further institutional complexity and contested authority domains. These concerns speak to the larger project that economic regulation is meant to achieve. The three tiers of the regulatory matrix – regulatory design, regulatory incentives, and regulatory governance – cannot be assumed. If any one of these elements is impaired, then the issue of regulatory credibility is diminished. This appears to be happening in the case of Thailand. In interviews with senior executives and managing directors of international power generation companies, the message was near universal, exemplified by one regional manager noting "it's a mess" (interview, 18 August 2009). When asked why, the interviewee responded with a laugh noting that on each visit to Thailand he always tries to take at least one ERC Commissioner to dinner, hoping to understand developments, directions, plans and policy in the pipeline. Of these conversations he offered the following observations; "pointless, some are clueless, nobody has an idea where things are going and nobody agrees." (interview, 18 August 2009). The impression of several of the industry interviewees appeared to be that commissioners were travelling frequently to European and North American cities ostensibly to study regulatory governance systems, but most laughed and inferred it was obviously not impacting their work (interviews, August 2009).

None of these impressions have aided the credibility of Thailand's regulatory system. Indeed, for investors into the Thai electricity sector, regulatory risk from policy instability and frequent policy changes has increased the risk premium, with investors demanding higher rates of return, stringent contractual indemnity, and in-built guarantees before committing investment capital – all of which has contributed to a higher cost environment for investors and end users alike. Indeed, one interviewee, a regional managing director of a large international generation company, noted that they continued to operate successfully in places like Pakistan without contractual issues and with predictability in terms of operating requirements and compliance standards. He compared this to Thailand, noting that Pakistan was easier and less risky! (interview, 18 August 2009).

These observations appeared to center around what the interviewee identified as “changing their minds”, where policy confusion or frequent policy changes has left investors disinterested. When questioned further about these risks, the interviewee explained that even the process of putting together bids or contemplating a strategy to engage the relevant stakeholders in Thailand was not worth the effort since it was likely to be the case that half way through any of these processes the “game plan” would change (interview, 18 August 2009). As one executive of a large British multinational power provider noted of Thailand, “it’s in our too hard basket until they work out what they are doing” (interview, November 2008).²²

These observations speak to poor regulatory outcomes if, as Levy and Spiller (1994) noted, economic regulation is meant to construct regulatory arrangements able to sustain private sector investment through credible regulatory commitments. Clearly, this is not the view of interview subjects engaged for this research. Rather, regulatory credibility amid a still impaired political environment suggests that governance in the sector remains unpredictable, the autonomy of the ERC still unclear, and the attributes of transparency, accountability, and stakeholder participation far from realized as instruments for effective regulation.

Going forward: Lessons

Thailand’s experiences with regulatory reform in the energy sector reveals much about the perils and pitfalls of institutional change and the consequences for regulatory governance. These lessons fall into four broad categories.

First and foremost are the lessons for policy makers in developing country contexts. Policy diffusion and the adoption of regulatory models from vastly dissimilar environments is a problematic policy exercise. While international benchmarking and the tendency to emulate “best practice” standards is now part of the policy makers lexicon and *raison d’etre*, the adoption of regulatory models and their transplantation into different institutional endowments can often produce unintended or even deleterious regulatory outcomes. Policy learning is not simply a process of policy emulation, and regulatory innovation and reform much more than regulatory diffusion and the transplantation of specific regulatory models. If Thailand’s experiences teach us anything it is the need for policy makers to calibrate regulatory reform with the institutional endowment, and to recognize that developing institutional capacity as an end in itself may yield much greater effectiveness with regard regulatory governance than the simplistic imposition of a new regulatory model.

Second, Thailand’s experiences of regulatory reform in the electricity sector speak to the enduring problems of institution building. Institutions are complex sets of individuals, interests, rules, practices, and norms. They involve an array of relations between stakeholder constituencies and complex mediations as a means of not simply allocating resources, but instantiating agendas, practices, and behaviors to effect desired outcomes. In the case of Thailand, reform of the energy sector has been a dual process of reconstituting the institutional environment responsible for energy sector governance at the very highest political levels as well as a process of creating new institutions mandated to regulate energy (the ERC) on the ground. The flux this creates in the institutional environment makes for all manner of problems, complicating the environment in which regulators are forced to operate and in the process increasing the burdens and costs on

regulators. The consequences for regulatory efficiency and the impact this may have on regulatory capacity can perhaps only be imagined rather than measured with any degree of precision. What is evident, however, is that radical policy innovation that both transforms institutional environments and creates new regulatory bodies generates exogenous factors that may end up increasing transaction costs rather than reducing them. Adaptation to new institutional terrains, developing new trust relationships between stakeholders and impacted constituencies, and developing transactional norms to facilitate the business of regulation generate added burdens – many of which new regulatory agencies may be ill equipped to manage.

Third, and relatedly, policy innovation of the regulatory apparatus and institutional environment can create all manner of rule confusion, reducing regulatory effectiveness and outcomes. The division of duties, responsibilities and the jurisdictional space that applies to the ERC, EPPO, the Ministry of Energy, and Ministry of Finance, is a case in point. At a recent meeting organized by the Asian Development Bank for electricity and water regulators in Thailand, for example, questions about specific areas of responsibility, jurisdiction and rule making authority had one ERC Commissioner repeatedly consulting the Legislation, admitting that it was not always clear who had specific authority over particular issues or if the ERC had jurisdiction to even consider certain matters (Bangkok, 27 July 2009). Rule confusion, contested rule making or, worse still, competition over roles and responsibilities, are key ingredients for poor regulation and inferior regulatory outcomes. This not only makes for an opaque regulatory environment but generates risks and costs for stakeholders as they try and navigate the regulatory terrain. Getting the institutional design right so that roles, responsibilities, and jurisdictions are clear and transparent should be an elemental concern for all regulators.

Fourth, reform of the institutional and regulatory environment in the Thai energy sector also highlights lessons about the appropriate mix between a regulator as an administrator and overseer of rules, standards, and practices, and the relationship between these activities and policy development. In the case of the ERC, its role in energy policy development as well as regulatory oversight of the sector is blurred, ostensibly engaging in both but in a manner that does not really define its relationship to energy policy formulation, the mechanisms for policy development between the Ministry, ERC and EPPO, or how policy roles are to be assigned. Again, institutional design is all important, requiring the transparent allocation of roles and responsibilities in order for effective regulation and policy development to be achieved.

These lessons are not exhaustive and speak more to a set of enduring problems rather than solutions. But in exploring them and highlighting the interplay between variations in the institutional endowments of developing countries, regulation, and the broader political environment within which transplanted regulatory models are often diffused, it is to be hoped that regulatory outcomes will be enhanced for the betterment of all.

Notes

- 1 See surveys at <http://www.ey.com>; DLA Piper “European Regulatory Risk Awareness Survey 2007” assessable at <http://www.dlapiper.com>.
- 2 Douglas North, address to the Lee Kuan Yew School of Public Policy, National University of Singapore, 11 March 2008.

- 3 While I do not address the methodological parameters of institutional analysis, I draw implicitly on the broader debates surrounding institutionalism in political science. See, for example, Hollingsworth (2000) and Hall and Taylor (1996). On the broader overarching debate surrounding governance and conceptual approaches to institutional processes in governance outcomes see Kaufmann *et al.* (1999).
- 4 Interviews were conducted in November 2008, between 26 and 30 January 2009, and August 2009.
- 5 Electricity demand grew by its six fold between 1982 and 2002, with consumption growing from 16,900 gigawatt-hours (GWh) to 108,400 GWh (Greacen & Greacen 2004, p. 518).
- 6 As Supannika Wattana *et al.* (2008, p. 43) notes, for example, for much of the 1970s and early 1980s, the World Bank was EGAT's main source of external financing, creating a dependent relationship that saw EGATs adopt much of the policy architecture favored by the bank.
- 7 By 1981, for example, over 50% of Thai's had access to electricity (Greacen & Greacen 2004, p. 519).
- 8 See "National Energy Policy Council Act, B.E. 2535" (1992), Government Gazette, 109, Part 7, 12 February, Kingdom of Thailand.
- 9 EGAT commenced purchasing power from large IPPs in 1999 and SPPs in January 1994.
- 10 Master Plan for State Sector Reform available at <http://www.mof.go.th/sepc/sepcfn1.htm>.
- 11 Greacen and Greacen (2004, p. 526) reports that NEPO commissioned the report outlining the reform recommendations at a cost of some US\$10 million which was paid to a consortium of foreign management companies.
- 12 "EGAT people in search of a future," *The Nation*, 25 June 1999.
- 13 The events surrounding Piyasvasti's relocation out of NEPO and his displacement as Thailand's energy Czar are contested. See Greacen and Greacen (2004, pp. 530–532).
- 14 RECC's are, in turn, charged with addressing the petitions of consumers against generators, EGATs and power distributors as it impacts retail operations, mediating consumer complaints, the development and proposal of corrective measures to improve measures regarding energy provision in the regions, coordination with the energy industry operators in securing information petitioned by consumers and mediating consumer complaints with industry operators to improve service delivery.
- 15 In the wake of the military coup and the reestablishment of democracy, Thailand experienced political instability with four different Prime Ministers in quick succession: Samak Sundaravej (29 January 2008–8 September 2008); Somchai Wongsawat (18 September 2008–2 September 2008); Chaovarat Chanweerakul (acting Prime Minister, 2 December 2008 to 17 December 2008); Abhisit Vejjajiva (17 December 2008).
- 16 At the time of writing, the ERC budget for 2009 had been approved. However, the details of this cannot be confirmed. Dr Direk Lavansiri, Chairman of the ERC, indicated the ERC budget would approach Baht THB600 million for 2009 and that the operating budget for the organization would come entirely from license fees (Interview, 26 January 2009).
- 17 These problems impact all levels of energy policy in Thailand. The relationship between EPPO, the Ministry of Energy, the permanent secretary for energy and the Cabinet, for example, reveal little policy coordination and an absence of policy consultation mechanisms. As the report on energy governance in Thailand noted, "there is no . . . defined mechanism that requires the executive to consult (EPPO) . . . on major policy issues or to evaluate how the executive responds to recommendations/decisions of the agency" (Electricity Governance in Thailand 2006; Section A: 15–16).
- 18 The Power Development Fund has multiple objectives. It is leveled against any utilities with a PPA greater than 6 MWs, and charged against production of natural gas, oil, diesel, coal, wind and solar power, biomass and hydro electricity generation. The fund compensates licensees who have provided services for underprivileged power consumers at below cost recovery rates;

- subsidizes rural electrification; pays for the rehabilitation of localities impacted by power plant operation; subsidizes the development of renewable energies; pays for public awareness campaigns in the use of energy; reimburses users under previous tariff formula who were over-charged for energy usage; and pays for the operation of the fund itself (Lavansiri 2008).
- 19 The ERC have announced the following administrative divisions: “General Provisions, Regulatory Body for the Energy Industry Operation, Regulation of the Energy Industry Operation, Energy Consumer Protection, Utilization of Immoveable Property, Redress of Disputes and Lodging of Appeals, Competent Officials, Disciplinary Procedures and Punishment” (Lavansiri 2008).
 - 20 It should be noted that it is not the practice in the Thai civil service for personnel to move between agencies or ministries. Thai Civil servants normally join a specific administrative arm or agency of the government and remain there for the duration of their career, gaining seniority through cumulative service (interview with Kurujit Nakornthap, Director General, Department of Mineral Fuels, Bangkok, Thailand, 27 January 2009).
 - 21 In other jurisdictions, for example, transparency standards extend to the public disclosure of all communications, meetings, phone calls and other forms of representation between regulators, industry operators and stakeholders, to reduce the possibility of nefarious activity, collusion and thus increase the impartiality and perceived legitimacy of the regulator.
 - 22 Recent studies by Udayasankar *et al.* (2008), also finds that there is strong evidence to suggest that paucity in regulatory environments adversely impacts the corporate governance of firms, downloading costs to business as they try and navigate opaque environments with poorly regulated competition policies which impair or degrade firm governance capacities.

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