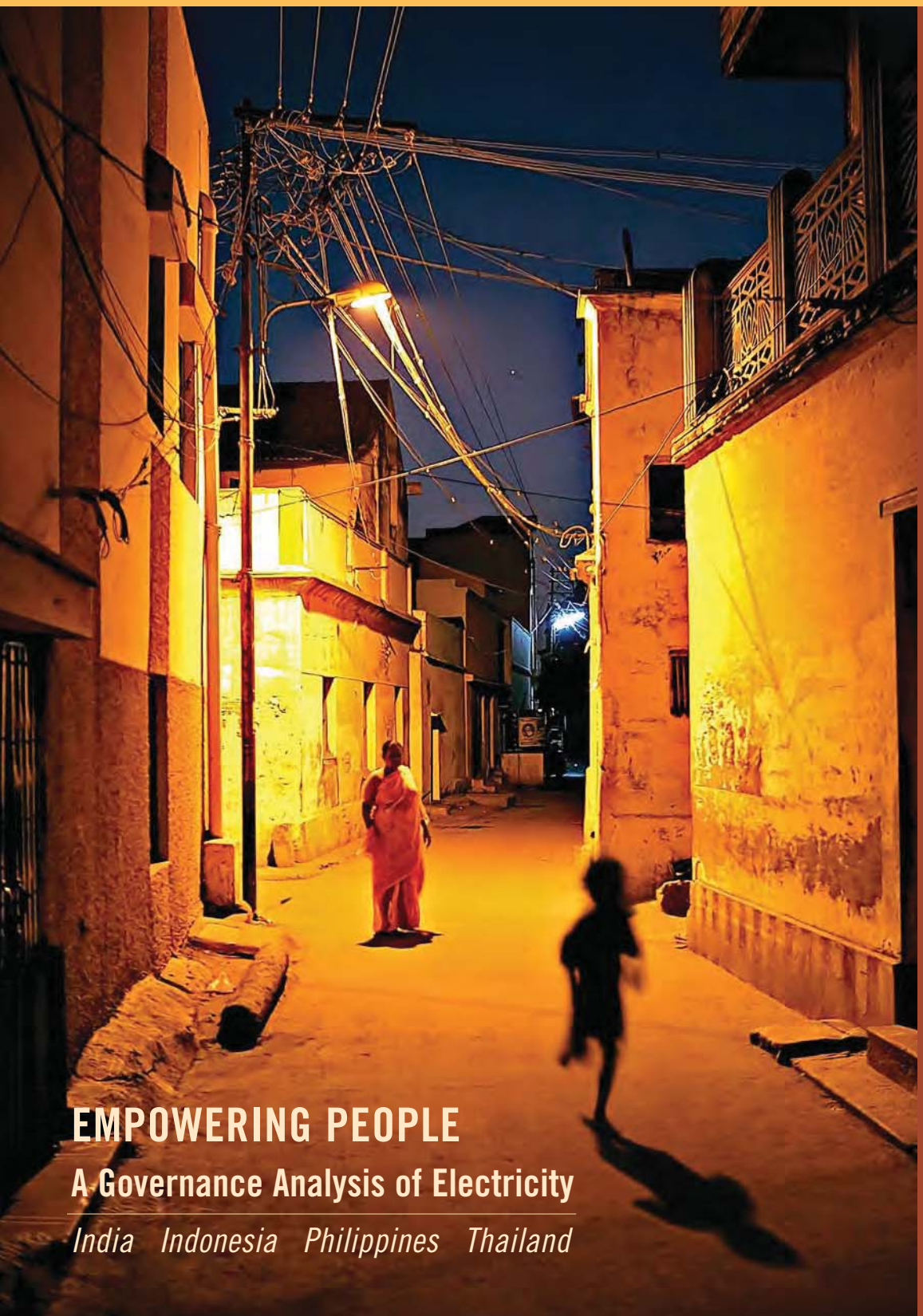
PRAYAS ENERGY GROUP

WORLD RESOURCES INSTITUTE



EMPOWERING PEOPLE

A Governance Analysis of Electricity

India Indonesia Philippines Thailand

SMITA NAKHOODA

SHANTANU DIXIT

NAVROZ K. DUBASH

EMPOWERING PEOPLE

A GOVERNANCE ANALYSIS OF ELECTRICITY

SMITA NAKHOODA
SHANTANU DIXIT
NAVROZ K. DUBASH

WORLD RESOURCES INSTITUTE

PRAYAS ENERGY GROUP

HYACINTH BILLINGS
PUBLICATIONS DIRECTOR

MAGGIE POWELL
LAYOUT

REBECCA PORTER
EDITOR

© OOCHAPPAN
WWW.PBASE.COM/OOCHAPPAN/TAMILNADU
COVER PHOTO

Each World Resources Institute report represents a timely, scholarly treatment of a subject of public concern. WRI takes responsibility for choosing the study topics and guaranteeing its authors and researchers freedom of inquiry. It also solicits and responds to the guidance of advisory panels and expert reviewers. Unless otherwise stated, however, all the interpretation and findings set forth in WRI publications are those of the authors.

Copyright © 2007 World Resources Institute. All rights reserved.

ISBN 978-1-56973-645-6

Printed in the United States of America on chlorine-free paper with recycled content of 50%, 20% of which is post-consumer.

CONTENTS

Acknowledgments iv

Foreword v

Executive Summary vi

1. Delivering Electricity Services:
The Case for Attention to Governance 1

2. Framing Electricity Governance 6

3. The Policy Process:
Setting Parameters for Electricity Governance 12

4. The Regulatory Process:
Balancing Stakeholders and Aligning Interests 31

5. Toward Better Decisions
Conclusions and Recommendations 40

References 47

Notes 49

About the Authors 53

Appendix I. Complete Indicator Summaries from the
Thailand, India, Indonesia, and Philippine Assessments
of Electricity Governance 54

Appendix II. The Electricity Governance Initiative
Coalitions in India, Indonesia, the Philippines, and Thailand 68

ACKNOWLEDGMENTS

The authors would like to thank colleagues from each of our organizations who assisted in various ways with writing and producing this paper. Crescencia Maurer was an essential member of the group that drafted the research toolkit on which this report is based. Several WRI colleagues provided valuable input to various drafts of the paper: Rob Bradley, David Jhirad, Jen Lesar, Heather McGray, Sarah Paraghamian, Jonathan Pershing, Jon Sohn, Frances Seymour, and Jacob Werksman. At Prayas Energy Group, Girish Sant, Subodh Wagle, and N. Sreekumar gave us valuable input and advice. At the National Institute of Public Finance and Policy, Dr. Govinda Rao extended full support for the project, Ashwini Kumar Swain provided research assistance, and Navin Bhalla and Anurodh Sharma ably provided management and administrative assistance. We are grateful for the external review comments received from experienced practitioners in the electricity and governance arenas: Dr. Allan Asher of Energy Watch (UK), Mohinder Gulati of the World Bank Group, R. Sudarshan of the United Nations Development Program, Puguh Sugiharto of PEN Consulting and the EGI Indonesia Advisory Panel, and Dr. Stephen Thomas of the Public Services International Research Unit (PSIRU) and the Business School at the University of Greenwich (UK). In addition, we appreciate detailed comments on the report received from expert colleagues in the EGI partner network including Athena Ronquillo Ballesteros of Green Peace International; Chuenchom Sangarasri Greacen of Palang Thai (Thailand); Bharat Jairaj of the Consumer and Civic Action Group (India); Roberto Julian of Preferred Energy, Inc (Philippines); Paisan Limstit of the Thailand Environment Institute; and Sudha Mahalingam, formerly of the Center for Policy Research (India), and Davida Wood of the Unites States Agency for International Development. While they bear no responsibility for the final product, their comments have significantly strengthened this report. Hyacinth Billings, Rebecca Porter, Maggie Powell, and Sabina Ahmed at WRI supported the editorial and production process.

The Electricity Governance Initiative has been supported by the C.S. Mott Foundation, the Energy Collaborative Philanthropic Working Group, the TIDES Foundation, the Netherlands Ministry of Foreign Affairs, the Foreign and Commonwealth Office of the United Kingdom through the Renewable Energy and Energy Efficiency Partnership, the United States Agency for International Development, and the Wallace Global Fund.

FOREWORD

With the power sector in desperate need of capital — more than $6.5 trillion is required in developing countries by 2030 — governments and international actors have focused on attracting private investment. But investment has in fact declined. Politically unacceptable reforms and ineffective regulatory regimes have not made for a favorable investment climate.

There is, of course, far more to the challenge than merely attracting capital. Electricity lights our homes and powers industry. In many developing countries service quality remains unreliable — even for those who can afford to pay high prices. Expanding access to the 1.6 billion people worldwide who live without electricity, and improving the quality and reliability of electricity supply are urgent socio-economic priorities.

At the same time, the power sector is associated with serious environmental problems, from local air pollution to the disruption of water ecosystems. Mitigating carbon emissions from electricity generation is central to addressing global climate change. Citizens and consumers are increasingly vocal about their dissatisfaction with the results of sector reform, which has largely been implemented without public input or accountability.

This report calls attention to the challenges of governing the power sector — of arranging processes, institutions, actors and incentives to align investment with social, environmental, and economic objectives. People who speak for the poor, the environment, and the public interest can play an important role in this new alignment. The authors conclude that successful social and environmental outcomes of power sector development are more likely if policy and regulation are open to public debate and scrutiny.

The analysis presented in this report is based on the work of the Electricity Governance Initiative (EGI), a unique collaboration of civil society, policymakers, regulators, and other electricity sector actors to assess policy and regulation using a common framework to define "good governance." Assessments have been completed in Thailand, India, Indonesia and the Philippines. EGI provides a toolkit to help civil society understand and influence decision-making in this technically complex sector.

To create a sustainable energy future, governments and the international community must reach out to civil society and empower people to be effective participants in electricity governance.

JONATHAN LASH
PRESIDENT
WORLD RESOURCES INSTITUTE

GIRISH SANT
TRUSTEE
PRAYAS ENERGY GROUP

EXECUTIVE SUMMARY

Policymakers, regulators, citizens, and the international community are grappling with the challenges of providing access to reliable and affordable electricity, and addressing major environmental challenges including climate change. The advent and rapid spread of a new "standard model" for electricity reform built around private ownership and competition, in the context of significant need for investment, have all left their mark on the electricity sector. But fundamental questions of public interests and sustainable development have not been adequately addressed. This research report makes the case for greater attention to governance of electricity –the processes, institutions, and actors that determine how decisions are made. Good governance is necessary to address the many challenges of sustainable energy. On the whole, policy and regulation are more likely to be successful if they are carried out in the open for all to consider and scrutinize.

Our analysis is based on assessments of electricity governance in India, Indonesia, Thailand, and the Philippines that were completed in 2005 using the WRI-Prayas-NIPFP Electricity Governance Initiative (EGI) Indicator Toolkit as a common research methodology (see Box A). While the importance of "good governance" is increasingly recognized, there is little understanding of what this means in practice in a technically complex sector such as electricity. The EGI indicators address transparency, public participation, accountability, and the capacity of various actors in policy and regulatory processes as they relate to electricity, with an emphasis on environmental and social considerations.

The EGI research approach enables a detailed diagnosis of key strengths and weaknesses in governance from a public interest perspective that supports efforts to address technical, operational, and investor aspects of electricity. Coalitions of civil society organizations with complementary expertise have worked together to use the indicator toolkit to assess governance in these four countries, with the guidance of an advisory panel of sector actors and government representatives. The assessments have served as a basis for constructive dialogue with sector officials and government representatives on how to improve governance, and helped build the capacity of the civil society actors involved to enforce accountability and participate in policy and regulatory processes in the electricity sector.

FINDINGS OF THE EGI ASSESSMENTS

The assessments suggest the following major emerging trends in electricity policy and regulation, and specific areas for consideration, caution, and improvement in electricity governance.

Electricity Policy and Planning

In general, very little information about the basis for new policy initiatives is shared with the public. The assess-

BOX A **THE ELECTRICITY GOVERNANCE INDICATOR**

BASELINE INDICATORS MAPPING THE ELECTRICITY SECTOR

POLICY PROCESSES (PP)

Institutional / Procedural

- Capacity and clarity of procedures of Legislative Committee
- Independence of Electricity Ministry
- Reporting by Electricity Ministry
- Quality of debate about reform and policy change
- Capacity of planning agencies
- Role of donor agencies
- Role of consultants
- Capacity of civil society
- Clarity of policy processes
- Availability of supporting documentation
- Quality of media coverage

Substantive Issues

- Asset evaluation
- Privatization and bidding
- Subsidies
- IPPs

REGULATORY PROCESSES (RP)

Institutional / Procedural

- Authority and autonomy
- Jurisdiction
- Selection and training of members
- Process for resolving conflicts of interest
- Financial and human resources
- Use of consultants
- Procedural clarity
- Mechanisms for public participation
- Disclosure of documents
- Basis for decisions
- Appeals

Substantive Issues

- Performance reporting
- Tariff philosophy
- Licensing
- Consumer service and quality of supply

ENVIRONMENTAL & SOCIAL ASPECTS (ESA)

Institutional / Procedural

- Clarity of environmental jurisdiction
- Executive, regulatory and legislative mandates
- Setting minimum environmental standards
- Inclusion of environment in planning and reform
- Access to redress on social or environmental grounds
- Utility engagement with public
- NGO capacity to address social and environmental issues

Substantive Issues

- Labor impacts
- Access to electricity
- Affordability
- Project-affected people
- Renewables
- Environmental and social performance reporting

The EGI indicators present an appraisal of the adequacy of the laws and practices in a country at a given moment, and suggest ways forward to improve performance. The completed indicator worksheets and analytical reports have been disseminated widely within each of the case study countries, and are publicly available at http://electricitygovernance.wri.org.

ments find that legislative processes have not allowed adequate debate of a vision for the electricity sector. There is inadequate transparency about critical issues such as the goals of electricity reform efforts, and the role of independent power production. The lack of transparency about the role of consultants is a serious shortfall, given that private-sector consultants have undertaken critical tasks such as preparing the economic analyses that justify decisions to corporatize, privatize, or restructure the sector, or drafting new electricity laws.

Opportunities for public participation in policy processes remain quite limited, and when consultations are conducted, input received is not always recorded or seriously considered by policymakers. Under such circumstances, public participation — which takes no small effort or expense to coordinate — is little better than wasteful tokenism. At the same time, having formal space for transparency, participation, and accountability means very little if stakeholders do not take advantage of this space to represent public interests.

The integrity and capabilities of executive agencies need to be improved. Conflicts of interest and political interference undermine the independence of the electricity executive in practice, despite the fact that formal criteria for appointment of senior staff do often exist. Designing adequate safeguards against conflicts of interest is a significant challenge. There is, however, an emerging recognition that environmental and social considerations fall within the mandate of electricity-sector institutions, which are beginning to invest in building human resources and budget capacity to address environmental and social aspects of electricity. In the Philippines, for example, senior officials in the Department of Energy must complete coursework in environmental and social sustainability in order to advance their careers.

Planning processes can help mainstream environmental and social considerations. Independent planning agencies such as the Energy Policy and Planning Office in Thailand, and the Central Electricity Authority in India, have significant technical capacity, but lack both credibility and resources. In Thailand, however, efforts are underway to conduct strategic environmental impact assessments for the electricity sector. There is inadequate coordination and coherence across various levels of government and utilities.

Regulation and Public Interests

There are significant legal provisions for transparency, public participation, and accountability in independent regulatory bodies in India and the Philippines. Even in a state-owned or -operated electricity sector, establishing an independent regulatory body can improve transparency, participation, and accountability in the sector and thereby enhance credibility and predictability from a citizen perspective. But effective regulation requires more than just the right rules, and it is vital to operationalize provisions for access to information and public involvement. There is significant scope for political intervention in the process by which regulators are selected, which presents a critical weakness in the regulatory process that jeopardizes its independence. Citizens have limited understanding or faith in the regulatory process, and regulators need to proactively build the trust of consumers and citizens.

Public interests such as environmental sustainability and social equity are seldom included in the mandates of electricity regulators, who consequently lack budgetary and human resources to address these aspects of the sustainable energy challenge. From a public interest perspective, it should be neither in the interests of consumers to have prices that are too high or too low. Certainly, inadequate cost recovery that results from artificially low prices can lead to inadequate investment, maintenance, and efficiency of electricity operations, and disrupt reliable supply of service. But by the same token, affordability and equity considerations, particularly in the context of expanding access to electricity for the poor, need to play a central role in regulation.

For their part, civil society organisations in each of the four case study countries have demonstrated significant interest in engaging in electricity governance. Yet while civil society has a crucial role to play in electricity governance, their capacity to participate in decision-making is constrained by limited financial and human resources, as well as access to technical expertise.

RECOMMENDATIONS

If improving governance can improve access to reliable electricity, particularly for the poorest, help address some of the inherent tensions of sustainable development, and aid a transition to cleaner energy, then it is well worth doing. The following recommendations represent first order priorities for governments, civil society groups, and the international donor community:

Improve transparency and debate about electricity policy

- Parliaments and legislative committees need to undertake a more informed and robust debate on the implications of implementing "techno-economic" reforms from a public interest perspective by the legislature. A range of citizen, expert and government input should be considered, and supporting documents should be publicly available prior to the final decision. Making the records of these debates publicly available can enhance the transparency and accountability of legislative processes.
- Clear processes for developing electricity policy need to be set up, and these procedures should be communicated widely, beyond sector insiders and industry actors well in advance so that people understand their opportunities to be involved. Systems to document the policy development process can be put in place at relatively low costs to enhance transparency about inputs into the decision, and improve accountability.
- More disclosure around issues often considered too "technical" for the general public to understand is essential. Greater public debate and scrutiny of these technical issues can help make the inevitable trade-offs between competing interests clear, and avert costly deadlocks. Transparency about the general terms of power purchase agreements is critical to ensuring that public interests are being protected, and can help curb corruption at the project transaction level. Similarly, when governments choose to sell publicly owned assets, greater transparency about how the sale price is determined can help ensure that the country is getting the best possible deal. An independent expert review of consultant recommendations can help a government make a considered decision about how best to respond. In many cases, civil society organisations and independent researchers may be able to provide new analysis, or identify innovative approaches to dealing with challenges.

Establish robust planning processes and mainstream environmental and social considerations

- The environmental and social aspects of the energy executive's mandate need to be made clear. In-house capacity to address environmental and social issues should be built, and systems for coordination with other government branches such as the Ministry of Environment or Health need to be improved.
- EIAs are a critical process through which citizen concerns and environmental impacts can receive due consideration. But in general, project level EIAs are increasingly reduced to a bureaucratic hurdle to project approval. The serious environmental and social impacts of electricity generation and transmission projects may be seen as "getting in the way" of economic development. Greater oversight and proactive involvement on the part of the national environmental regulator is needed on this count.
- Establishing an independent planning agency with well qualified staff can significantly strengthen the technical rigour of planning processes, but better systems and mechanisms need to be put in place to ensure that their recommendations are taken in to account by policy makers. It is important to ensure coherence across plans at the national, local and utility levels so that all agencies are working towards common goals. Regardless of the level at which plans for the electricity sector are developed, there is a need for greater public input into these processes, and environmental issues – including global climate change need to be given particular emphasis in this context. For its part, civil society has an important role to play in monitoring implementation of electricity plans, and demanding accountability.

Operationalize transparency of regulation and support citizen engagement

- Clear criteria are needed to determine which documents are confidential, and which are in the public

domain, rather than relying on individual staff to make these judgments. Legal provisions – such as requirements to disclose information to the public – need to be complemented with practical measures and systems to operationalize these provisions. These include databases that help citizens identify and access documents, ensuring that these documents are available at a reasonable cost, and efforts to make people aware that this information is available to them. Advancements in information technology have made such measures increasingly easy to execute and reduced the costs of doing so.

- Special institutional mechanisms can be used to include stakeholders and socio-economically weaker groups of society in the regulatory process. For example, a consumer representative may be appointed, or regulatory staff may be asked make submissions on behalf of weaker groups. Regulators can also be more proactive about engaging citizens and civil society organizations, and help familiarize them with the regulatory process, and how they can play a role. If there are strong provisions for transparency, participation, and accountability in electricity regulation, credibility and predictability in electricity from a citizen perspective can be enhanced.
- The selection of credible and competent regulators is critical to the success of regulation. It is therefore important to have public composition and eligibility criteria for new regulators, and well defined procedures to this end. Greater transparency about the basis for selecting regulators can help create a degree of accountability as to the competence of nominated persons. Clear provisions to prevent conflicts of interest among regulatory commission members and staff are also necessary. Regulation is a complex and dynamic business, and it is therefore important to provide regulators with training.

Invest in improving the effectiveness of public engagement in electricity governance

- There must be room for a decision to be influenced or changed based on public input. While public participation can help build public acceptance of decisions, these efforts must achieve more than simply confirming pre-determined choices and decisions. Feedback mechanisms to incorporate public input as appropriate (or clarify the basis on which input has been disregarded) are critical if public participation is to be useful. Governments can make more concerted efforts to collect a range of public input, including from stakeholders who may be critical of government positions on issues, and particularly from stakeholders who will be most directly affected by the decision in play. In such contexts, the use of mass media such as radio, newspapers, television, and the internet can help build public awareness, particularly among weaker groups.
- Citizen interest and capacity to actively participate in electricity sector governance will largely determine whether the transparency, participation and accountability provisions proposed have a positive impact. The technical complexity of the electricity sector adds to the challenge of sustaining vibrant civil society input in such processes. Financial and human resource constraints are also a critical barrier to civil society capacity for fully utilizing opportunities to express their voice. Training programs, and efforts to catalyze closer ties between advocacy oriented groups, technical experts and academics, are valuable and important measures to build capacity. Governments and the international community have an important role, and indeed a responsibility, to reach out to civil society and empower them to be effective participants in electricity governance.

1

DELIVERING ELECTRICITY

THE CASE FOR ATTENTION TO GOVERNANCE

Accepted patterns of decision-making in the electricity sector are changing. Citizens increasingly desire a voice in decisions that have been the domain of technocrats and businessmen, while claiming a role in processes that are the charge of legislators, regulators, and government. Civil society has successfully generated attention to issues of public interest in the electricity sector such as affordability, efficiency, control of corruption, viability, access, and environmental sustainability.

In 2004, Indonesian courts overturned the 2002 Electricity Reform Law on the grounds that it was unconstitutional, ruling that essential public services must remain in public control, in response to an appeal filed by the labor unions of the national electric utility, PLN. In 2006, the Thai Administrative Court responded to a case filed by a coalition of consumer organizations by reversing the corporatization of the Energy Generation Authority of Thailand, ruling that the process was fraught with conflicts of interest. In the Philippines, civil society groups have drawn attention to regulatory decisions taken without adequate transparency or public input; civil society groups have also worked with local government in Negros province of the Philippines to develop new policies on renewable energy. In India, civil society has drawn attention to public interests, particularly in electricity regulation, but failures to operationalize transparency and accountability provisions present in the law are a continued obstacle to improving conditions in the sector.

This report makes the case for greater attention to governance of electricity – the processes, institutions, and actors that determine how decisions are made – in order to meet the challenges of sustainable energy. On the whole, policy making and regulation are more likely to be successful if they are carried out in the open for all to consider and scrutinize. The report is based on assessments of electricity governance in India, Indonesia, Thailand, and the Philippines that were completed in 2005 using the WRI-Prayas-NIPFP Electricity Governance Indicator (EGI) Toolkit.[1] Using this toolkit as a common research methodology, we map the rules, mechanisms, and understandings that shape stakeholder involvement in electricity governance in these four countries. Our focus is on transparency, public participation, accountability. and the capacity of various actors in policy and regulatory processes as they relate to electricity, with an emphasis on environmental and social considerations.

DELIVERING INFRASTRUCTURE SERVICES: THE CHALLENGE OF SUSTAINABLE ELECTRICITY

The longstanding model of the publicly owned and operated utility has performed egregiously in many parts of the developing world, and is increasingly being reconsidered. During the 1990s, the perceived availability of private capital and the emergence of private-sector-oriented models of service delivery

BOX 1 | **THE NEW MODEL FOR ELECTRICITY**

In the late 1990s, the deficits of state-owned utilities began to be seen as burdens on state budgets. In many countries the power sector suffered from poor technical and financial performance, providing low returns on investment, limited access to electricity (particularly for the poor and in rural areas), unreliable service, and poor environmental performance. With demand for electricity growing rapidly, it was not clear that governments would be able to fund power sector development. Attracting new sources of finance – especially foreign direct investment – and recovering the costs of producing electricity became key drivers for reform. Privatization also became more attractive as the sale of publicly owned assets was a means of raising cash under conditions of fiscal crisis.

The emerging model of electricity reform has involved changes in management practices (which may or may not involve changes in ownership from government to the private sector). In addition, many countries have begun restructuring for competition, "unbundling" vertically integrated utilities. While privatization and restructuring are separate in theory, they tend to be linked in practice. Purveyors of the new model have insisted that the introduction of competition must precede privatization, the sequence being to restructure, regulate, and only then privatize.

Governments have introduced changes in management to different degrees. They may choose to *commercialize*, and surrender detailed control over state-owned enterprises and promote operation according to commercial principles. In opting for *corporatization*, the government formally relinquishes control and management of state-owned enterprises and establishes a corporation. Shares in this corporation may be traded in the stock markets to raise cash for the government. The government may still set overall objectives for the corporation, however, and subject it to regulatory oversight. In pursuing full scale *privatization*, the government sells a corporation to private owners, who are able to tap the capital markets.

Approaches and the extent to which competition has been introduced in electricity have similarly varied. Historically, electricity has been a *monopoly* industry wherein a single (generally state-owned) entity handles generation and transmission to distribution companies.

combined to challenge the public utility approach. The notion that private participation would help solve the crisis in public service provision was swept up in the larger currents of the "Washington Consensus" approach to economic reform organized around macroeconomic stability, liberalization, and privatization advocated by international financial institutions.[2] Electricity has been at the forefront of experiments for reforming the institutional mechanisms for service delivery. The advent and rapid spread of a new "standard model" for electricity reform built around private ownership and competition, the initial the dramatic arrival of private investment, and the influences of "new public management" – with its emphasis on outcomes and separating policy and implementation – have all left their mark on electricity, as detailed in Box 1. In many countries, particularly in Asia, electricity reform has been initiated in the context of macro-economic crisis. These reforms have been designed and adopted through closed and exclusive processes, often driven by pressures from the international donor community, and seldom tailored to suit local circumstances or address public interest considerations.

But electricity has impacts on many public interests: for almost a century, it has been closely linked to larger processes of development. Electricity is needed for industrial growth and agricultural production. It supports industrial lifestyles, particularly in

BOX 1 | CONTINUED

The *single buyer* model features competition in generation by introducing Independent Power Producers (IPPs) who may sell electricity to a single purchasing agency on the basis of a power purchase agreement (PPA). In *wholesale competition,* transmission, generation, and distribution are separate commercial enterprises. Electricity distribution companies buy power from competing generators. All generators have open access to a transmission network to deliver power through a wholesale electricity market usually organized as a power exchange or a pool. Distributors maintain monopolies on sales in their service areas. In *retail competition* conditions, competing generators sell electricity directly to distributors, retailers, and final consumers. Generators have access to both transmission and distribution on the basis of regulated prices. Consumers may purchase power from a retailer or directly from a generator. It should be noted that there is no single, proven electricity market design; rather, countries have come up with institutional designs to fit their history, politics, and national contexts.

It can, however, be difficult to introduce competition in this sector, as there are significant structural pressures in favor of vertical integration since electricity cannot be easily stored, generating units have fixed capacities, and demand for electricity is relatively inelastic. While the theory of competition maintains that only components involving unavoidable natural monopolies or substantial sunk capital should be placed under regulation, in practice, competition raises new challenges that require regulatory interventions and proactive efforts to address questions of public interest.

Sources

Dubash, Navroz. 2002. *Power Politics – Equity and Environment in Electricity Reform*. Washington D.C.: World Resources Institute.

Hunt, Sally and Graham Shuttleworth. 1996. *Competition and Choice in Electricity*. New York: John Wiley and Sons.

Kessides, Ioannis N. 2004. *Reforming Infrastructure – Privatization, Regulation, and Competition*. Washington, D.C.: The World Bank and Oxford University Press.

the information age. In developing countries, the arrival of electricity brings the promise of relief from drudgery, increased productivity – notably of agriculture – and the possibility of enhanced access to health and education. Yet 1.6 billion people still lack access to electricity, and in many countries unreliable electricity supply and brownouts are believed to slow economic growth by as much as 1% to 4%.[3] At the same time, the electricity sector also accounts for 17% of global greenhouse gas emissions[4] and more than 43% of carbon dioxide emissions from energy-related sources. Mitigating emissions from electricity generation is therefore central to addressing the urgent challenge of global climate change. Improving access to electricity at a national level can conflict with the need to protect the climate system as a global public good. Many projects in the electricity sector also have more localized direct environmental impacts; for example, while electric light and heat greatly reduces indoor air pollution, low-grade coal-fired power plants contribute to local air pollution and respiratory disease; large hydropower projects can disrupt water ecosystem services, cause changes in land use, and displace people and communities.

Efforts to remake the electricity sector along the lines of the new standard model discussed in Box 1 have fallen short of success on many fronts. While reforms were intended to attract new investment in electricity infrastructure, foreign investment in the sector has proven difficult to attract despite changes in ownership toward privatization – indeed, investment

in electricity is on the decline despite high demand.[5] Between 1990 and 1997, US$66 billion of foreign capital was invested in Asian electricity,[6] but since then foreign investment electricity has fallen dramatically. Reforms oriented towards privatization have not addressed corruption and theft: globally $8 billion in capital expenditure in electricity is likely lost each year to corruption, and losses due to electricity theft cost the sector around $33 billion per year.[7] Centralized fossil fuel sources of energy continue to dominate supply, while the urgency of global climate change necessitates fundamental changes in how electricity is used and generated. Citizens and consumers are increasingly vocal about their dissatisfaction with the results of electricity reform. Even in the Latin American countries that pioneered the experiments with electricity ownership, Latinobarometro polls of public opinion suggest that citizens are unhappy with the results of privatization of service sectors.[8] Governments from Indonesia to South Africa are slowing and halting privatization of the electricity industry. After a decade or so of restless experimentation, punctuated by high profile setbacks,[9] it is clear that the problem, as well as the solution, lies less in ownership and more in how the sector is governed.[10]

ELECTRICITY GOVERNANCE: A CRUCIAL PIECE OF THE SOLUTION

"Governance" has become a widely used term that has rapidly outgrown its original, limited focus on the role and functions of government.[11] As Florini asserts in her exploration of globalization and sustainable development, *The Coming Democracy*, "[t]he difference between the rosy and gloomy scenarios boils down to a single word: governance. Governance is something more than the familiar processes of governments. Governance refers to all the ways in which groups of people collectively make choices."[12] We use the term "governance" in this expanded sense to focus on *how* decisions are made [13] and as an exploration of the role of multiple actors in decision-making. In this expanded definition of governance, the roles of NGOs, the private sector, and citizens are important and legitimate; the ability to participate in governance rests not only in formal authority, but also in institutionalized rules, norms, and understandings between actors.

Citizens play an important role in ensuring the "democratic competence" of public officials who are charged with ensuring provision of services.[14] Strengthened deliberative processes present a means of enhancing public administration.[15] In its analysis of institutional forms that link service providers, clients, and the state, the World Bank's 2004 World Development Report on service delivery highlights the important role of consumer "voice" and consumer power as accountability mechanisms. But there is a distinction between citizens asserting their voice to demand access to all levels of decision-making and the truncated form of "customer" participation in specific complaints about service that is more commonly accepted.[16] Through their advocacy, civil society groups across the world have successfully generated attention to issues of public interest in the electricity sector such as affordability, access and rural electrification, efficiency, control of corruption, and environmental sustainability. To move beyond consultation to actual influence, citizens must have access to meaningful mechanisms of participation, and these mechanisms should not be within the ad hoc discretion of governments, but based on a right to participate.[17]

This expanded definition, however, is not the only sense in which governance is evoked in the context of electricity. With the rise of electricity restructuring, effective governance is often defined in terms of the conditions necessary to attract private investment in electricity and create a stable marketplace. From this perspective, governance is about the rule of law, and the predictability of investment conditions.[18] The direct perspectives of investors are given significant consid-

eration in the work of many donor agencies, governments, and private sector actors including financiers and consultants. Indeed, as Box 1 details, electricity restructuring of the recent past has organized reform around the objective of attracting investment.[19] This framing of governance from an "investor" perspective is important and necessary. But it fits within a broader set of socio-economic, political, and environmental considerations that are frequently overlooked. Too often, there is a presumption that shifting toward more commercial operation, distancing the state from ownership and operation, and empowerment of citizens as consumers will automatically strengthen governance. While accountability to individual consumers may be somewhat strengthened, accountability to citizens may be weakened.[20] This is not to assert that direct public participation, transparency, or accountability under a public utility model were necessarily adequate before efforts were made to commercialize electricity. But if reforms are not socially relevant or politically acceptable, then the rule of law and predictability that investors seek cannot be achieved. If public interests are to be advanced, they need to be explicitly factored into reform design alongside investor perspectives and backed by political commitment.

Good governance is necessary – although it may not always be sufficient – to allow good outcomes. It allows different perspectives to be voiced, provides space for debate on the merits of proposed approaches, and provides clarity about the assumptions underlying decisions. Improving transparency, public participation, and accountability to advance governance from a public interest perspective is essential to curb corruption and opens up the possibility of unseating vested interests that may have a stranglehold over electricity decision-making.[21] Without formal space and measures to allow public input, access to information, and accountability, it is difficult to ensure that a full range of considerations and perspectives are taken into account. How decisions are made in the electricity sector is likely to strongly influence their success and sustainability. Improving governance is contingent on building the capacity of sector actors and institutions to create "formal institutional space" for citizen involvement, as well as the capacity of civil society to occupy these "spaces."

It is worth taking a moment to examine this premise. After all, the practice of good governance does not come without cost. Official decision processes are often slow enough without adding the additional complications of allowing public participation and ensuring public access to information.[22] Admittedly, government agencies sometimes see active citizens and organized communities as impediments to sound – or expedient – decisions. But involving the public in decision-making frequently produces better decisions. A review of the success of 239 cases of public participation in decision-making related to the environment in the United States performed by the independent research institution Resources for the Future found that in a significant majority of cases (68%), decisions were substantively improved. The report concluded "the public is perfectly capable of [if not essential to] improving decision quality." The analysis further suggested that the process of participation – rather than its context or the nature of the issues at hand – is largely responsible for success and that intensive and deliberative processes are more likely to be successful.[23] Even in contexts where civil society and citizens may have limited capacity to make robust interventions in technically complex decisions, creating space for meaningful public participation is likely to facilitate broader public acceptance of decisions, by building a sense of inclusion and ownership of the final decision.

The EGI indicator toolkit, described further in the following section, builds on these ideas to assess whether institutions systematically provide space for public involvement in governing services, and whether and how these spaces are used in practice.

2

FRAMING ELECTRICITY GOVERNANCE

RESEARCH APPROACH

SCOPE OF ANALYSIS

From the perspective of involvement in decision-making, electricity governance can be broadly addressed on three levels: policy, regulation, and operational implementation. The Electricity Governance Initiative is directed at the two "upstream" arenas of policy and regulation. Policy concerns legislative and executive decision-making processes. We do not explicitly address questions of governance as they relate to allocating and mobilizing financial resources to the electricity sector. Regulation – which in most countries has recently been separated from the government executive and assigned to independent agencies – is concerned with translating laws and policies into implementing regulations and ensuring compliance with them. Operational implementation relates to utilities and their interface with consumers. Issues of implementation are important, and considerable attention has been paid to customer-oriented institutions such as consumer grievance councils and ombudsmen at the utility level. Further work in this area is necessary but is beyond the scope of this study.

POLICY: TOWARD A RESPONSIVE STATE

Direct public engagement in the electricity policy process may, at first glance, appear difficult to understand and advocate. The electricity sector is highly technical and normally the province of experts. The accepted democratic recourse for legislative and policy decisions is usually understood to be the electoral process, although citizens may often lack access to the information necessary to take informed positions and hold representatives accountable.[24] Regardless, elections are a crude instrument for articulating preferences about policy, planning, and holding policy-makers to account for their decisions.[25]

There is sufficient and growing evidence to suggest that direct public engagement in the policy process is both warranted and useful. The legitimacy of decisions rests not only in effectiveness, but also in procedural fairness and governments being accountable to their citizens in practice.[28] This in turn requires not only good management and committed, competent public servants, but also that transparency and space for public input be built into government functioning, allowing "social accountability" for policy. Social accountability has been defined as "a proactive process by which public officials inform about and justify their plans of action, their behavior and results and are sanctioned accordingly."[29] Ideally, the state is "responsive," and there is active cooperation between public authorities and civil society based on shared values of participatory democracy.[30]

Electricity governance is ultimately and inevitably impacted by the overarching public policy, political economy, and civil service structures of a country. A well functioning electricity sector rests on some

overarching political system, a set of accountability relationships, and various arrangements of checks and balances. Administrative decision frameworks are not merely cumbersome hoops to be negotiated or circumvented, but actively shape the "political opportunity structure" that determines access to decision-making.[26] Consequently, these frameworks influence the outcomes as a result of particular decisions.[27] This analysis of electricity governance is oriented toward administrative system organized through democratically elected government. Our approach may therefore be difficult to apply in its entirety in countries such as China or Vietnam, and further work is necessary to better understand the governance dynamics that drive electricity policy in these countries in order to identify approaches to ensure that sustainable development objectives are achieved.

REGULATION: AN IMPORTANT ARENA FOR PUBLIC ENGAGEMENT IN ELECTRICITY

Regulation is a new and increasingly important governance mechanism in electricity. Regulatory bodies are responsible for licensing power plants and other infrastructure services and for setting service and efficiency standards. They can also play an important role in addressing environmental and social considerations such as extending universal and high quality access to electricity and managing the impacts of power generation on the environment – particularly by facilitating the entry of clean renewable energy technologies – and affected communities. As such, regulatory processes structure and manage the economic, financial, social, and environmental aspects of electricity performance.

In most countries, regulation of electricity was initially established as a way of ensuring stability, predictability, and economic rationality in key decisions like tariff setting, thereby providing signals of stability and predictability to investors. The early and seminal analysis of regulatory governance explored how regulatory institutions could be designed in a wider range of political contexts to achieve this objective of signaling credibility and attracting investment.[31] Recent efforts to further operationalize regulatory governance notably include attributes like transparency and participation, but continue to emphasize investor concerns.[32]

Issues such as competence of regulatory staff, independence, autonomy, authority, and adequacy of resources are central to the effectiveness of regulation. From a wider perspective, regulatory governance can also provide scope for expression of consumer and citizen concerns that only partially overlap with those of investors. Indeed, while born out of the desire to separate economics from politics in decision-making and signal credibility to private investors, regulation has increasingly become an important site for social policy related to electricity and a fruitful arena for public engagement.[33]

A detailed study of 13 State Electricity Regulatory Commissions (SERCs) in India concluded that while many challenges remain, regulatory agencies have made significant progress toward making critical decision processes, such as tariff setting, open and transparent. SERCs are beginning to provide the political space for public engagement in these processes.[34] A larger global study echoes these findings, concluding that while regulatory responsiveness is essential, the problems of effective mechanisms for direct participation in regulation persist and that these problems are greater in developing countries.[35] This evidence supports a broader sense that the democratization of regulation through the formal and direct inclusion of civil society organizations is the leading edge of future regulatory developments.[36]

THE ELECTRICITY GOVERNANCE TOOLKIT AND ASSESSMENT METHODOLOGY

The EGI perspective on governance has been informed by The Access Initiative indicator toolkit and implementation methodology, which seeks to assess the law and practices of environmental governance across countries.[37] The analytical framework used to conceptualize good governance in The Access Initiative is based on the four pillars of the Aarhus Convention. EGI also builds on Prayas Energy Group's 2003 survey assessing transparency, resources, and public participation in India's State Electricity Regulatory Commissions. For each research question, indicator values of (i) Low, (ii) Medium-Low, (iii) Medium, (iv) Medium-High, or (v) High are possible. Each value is based on a documented explanation of the extent to which the particular attributes of electricity governance have been met. In an effort to build a common understanding of what good governance in electricity entails in practice, World Resources Institute (USA), Prayas (India), and the National Institute of Public Finance and Policy (India) developed a toolkit of research questions that indicate areas of

BOX 2 | PRINCIPLES OF GOOD GOVERNANCE

Transparency and Access to Information: Transparency is the process of revealing actions so that outsiders can scrutinize them. Facilitating access to information is critical in order to inform and engage public constituents. EGI indicators assess the extent to which information relevant to key decisions in the electricity sector is made available to the public. Attributes of transparency include the comprehensiveness, timeliness, availability, comprehensibility of information, and whether efforts are made to make sure information reaches affected and vulnerable groups as appropriate.

Participation: Diverse and meaningful public input helps decision-makers consider different issues, perspectives, and options when defining a problem. It allows them to gather new knowledge, integrate public concerns with decision-making, and manage social conflicts by bringing different stakeholders and special interest groups together at an early stage when change is still feasible. The value of public participation in decision-making is increasingly well-recognized and makes decisions more credible. Elements of access to participation include formal space for participation in relevant forums, the use of appropriate or sufficient mechanisms to invite participation, the inclusiveness and openness of such processes, and the extent to which the gathered input is taken into account.

Accountability and Redress Mechanisms: Access to justice and redress are necessary to hold governments and actors in the private and public sector accountable, to enable individuals and public interest groups to protect their rights to information and participation, and to challenge decisions that do not take their interests into account. This includes the extent to which there is clarity about the role of various institutions in sector decision-making; there is systematic monitoring of sector operations and processes; the basis for basic decisions is clear or justified; and legal systems uphold the public interest.

Capacity: Capacity refers to the government's social, educational, technological, legal, and institutional ability to provide public access to decision-making, as well as the ability of civil society to make use of such access. This includes the capacity of government and official institutions to act autonomously and independently, the availability of resources (both human and financial) to provide access, and the capacity of civil society (particularly NGOs and the media) to analyze the issues and participate effectively.

relative strength and weakness in electricity decision-making processes.

The indicators address public participation, transparency, accountability and capacity as these characteristics pertain to a comprehensive range of issues related to policy and regulatory processes in electricity, with an emphasis on environmental and social considerations. These principles of good governance are described further in Box 3, and Figure 1 presents an overview of the issues addressed by these indicators. The indicator design seeks to minimize the scope for arbitrary or inconsistent value judgments (a sample indicator is presented in Table 1; the complete set of electricity governance indicators is included in Appendix 1). The EGI toolkit helps civil society organizations collect substantiated information, which serves as a powerful basis for constructive dialogue with officials and government representatives to improve governance.

FIGURE 1 | THE ELECTRICITY GOVERNANCE INDICATOR SCHEMATIC

BASELINE INDICATORS
MAPPING THE ELECTRICITY SECTOR

POLICY PROCESSES (PP)

Institutional / Procedural

- Capacity and clarity of procedures of Legislative Committee
- Independence of Electricity Ministry
- Reporting by Electricity Ministry
- Quality of debate about reform and policy change
- Capacity of planning agencies
- Role of donor agencies
- Role of consultants
- Capacity of civil society
- Clarity of policy processes
- Availability of supporting documentation
- Quality of media coverage

Substantive Issues

- Asset evaluation
- Privatization and bidding
- Subsidies
- IPPs

REGULATORY PROCESSES (RP)

Institutional / Procedural

- Authority and autonomy
- Jurisdiction
- Selection and training of members
- Process for resolving conflicts of interest
- Financial and human resources
- Use of consultants
- Procedural clarity
- Mechanisms for public participation
- Disclosure of documents
- Basis for decisions
- Appeals

Substantive Issues

- Performance reporting
- Tariff philosophy
- Licensing
- Consumer service and quality of supply

ENVIRONMENTAL & SOCIAL ASPECTS (ESA)

Institutional / Procedural

- Clarity of environmental jurisdiction
- Executive, regulatory and legislative mandates
- Setting minimum environmental standards
- Inclusion of environment in planning and reform
- Access to redress on social or environmental grounds
- Utility engagement with public
- NGO capacity to address social and environmental issues

Substantive Issues

- Labor impacts
- Access to electricity
- Affordability
- Project-affected people
- Renewables
- Environmental and social performance reporting

TABLE 1 | SAMPLE REGULATORY PROCESS (RP) INDICATOR

Indicator RP 13 - Procedure for public access to regulatory body documents

Relevance of the Indicator: It is important for regulatory body documents to be available to the public. But for effective use of such access to information it is equally essential that at the operational level there are no hurdles to actually exercising this right to information and obtaining relevant documents. This indicator focuses on operational issues/practices regarding access to documents.

Values	Select	Explanation and Justification
Not applicable / Not assessed	**(0)**	
None of the four elements of desired procedure for public access to regulatory body documents are present	**(i) Low**	
One element of desired procedure for public access to regulatory body documents is present	**(ii) Medium-Low**	
Two elements of desired procedure for public access to regulatory body documents are present	**(iii) Medium**	
Three elements of desired procedure for public access to regulatory body documents are present	**(iv) Medium- High**	
All four elements of desired procedure for public access to information are present	**(v) High**	

Elements of Quality

- *Well-indexed database of documents* – This will ensure that people know what documents are available to the public.
- *Simple, well-defined procedure for inspecting/obtaining documents* – Absence of such procedure discourages people from exercising their right to information, as they must spend significant time and effort to obtain documents. Also the lack of such procedure becomes a tool for officials to deny information.
- *Reasonable cost* – The cost for assessing (inspection or obtaining copies) the documents should be reasonable, as too high a cost would again discourage actual exercise of the right to information (reasonability could be judged based on considerations such as expenses to photocopy documents or administer the document disclosure system.
- *Wide dissemination of information regarding the preceding three elements* – the use of measures such as advertisements, brochures, websites, and newsgroups is essential to inform and encourage people to use such procedures. Without dissemination, people may not be aware of the measures in place, and consequently may not use them.

The EGI methodology focuses on how decisions are made, rather than what decisions are made. For example, indicators addressing the selection process for members of regulatory commissions focus on the existence of an "independent" and "transparent" process, rather than assuming that only particular mechanisms would be independent and transparent, the choice of which is likely to depend on national context. The toolkit addresses decision-making processes in electricity at the legislative, executive, and regulatory levels, recognizing that electricity is closely tied to larger political processes. It seeks to balance the need to be comprehensive and capture the full range of governance considerations against the need to limit the number of indicators for simplicity and manageability. The toolkit is intended to be applicable across countries, and the indicators can be used to assess governance in sectors with different terms of ownership and differing industry and institutional structures. It is not, however, designed to allow

quantified comparison of governance "scores" across countries. Such a comparison is not useful given the vast differences in social and political traditions and norms across different countries.

In completing the assessments of electricity governance that have formed the basis of this report, coalitions of civil society organizations and contributors with complementary expertise in areas such as renewable energy, electricity regulation, law, economics, environmental issues, and rural development work together to use the indicator toolkit to asses governance in their country. The completed indicator worksheets and analytical reports assessing governance in Thailand, India, Indonesia, and the Philippines have been disseminated widely within each of the case study countries and are publicly available at http://electricitygovernance.wri.org. EGI teams work in partnership with an advisory panel of electricity experts and government and industry representatives, reviews the assessments to ensure credibility. The advisory panel also supports the implementation team of NGOs to develop a strategy to advance the assessment recommendations.

Teams completing an assessment rigorously document the sources and basis for the indicators generated. They also exercise discretion in selecting indicators from the toolkit that are most relevant for national priorities and challenges, and as a result they may not complete all 63 indicators. Consequently, data from all four countries is not always available for all of the indicators discussed. WRI, Prayas, and NIPFP have closely supported the teams in India, Indonesia, Thailand, and the Philippines to complete these assessments.

Use of the EGI indicator toolkit is meant to complement ongoing work and advocacy strategies in civil society around electricity sector issues of public interest. The electricity sector is complex, and sound understanding of the decision chain and of potential points for leverage and mutual benefit is critical for effective engagement by civil society in the electricity sector. These assessments do not serve as a substitute for further research and advocacy around better outcomes or performance. They are instead designed to serve as a complement that will significantly enhance these advocacy efforts. The "indicator" based approach also is not intended to be an alternative to analysis of governance processes from the political science or political economy perspective, but to supplement such efforts.

The following analysis based on the results of these assessments of electricity governance in India, Indonesia, Thailand, and the Philippines is not a comprehensive overview of the various detailed issues addressed by the national reports. [38] Rather, we seek to highlight major emerging trends and areas for consideration, caution, and improvement in electricity decision-making. We begin with a summary of insights into policy processes, turn next to regulation of electricity, and conclude with a set of final observations and recommendations.

3

THE POLICY PROCESS

SETTING PARAMETERS FOR ELECTRICITY GOVERNANCE

EXPERIENCE WITH ELECTRICITY REFORM AND RESTRUCTURING

Electricity reform efforts were initiated in India, Indonesia, Thailand, and the Philippines in the early 1990s. In all four countries, the first step in this process was new legislation that allowed private-sector participation in electricity generation through "independent power producers." But the four countries that participated in the pilot phase of the Electricity Governance Initiative have all had quite different experiences with electricity sector reform and privatization. Sweeping electricity reform acts were passed in the Philippines and in India in 2001 and 2003 respectively. In Indonesia and Thailand, privatization efforts have been slowed, halted, and even reversed.

Efforts to restructure the Indonesian electricity sector were initiated in the context of an International Monetary Fund economic bailout program for Indonesia following the Asian financial crisis, but in December 2004, the Indonesian Constitutional Court overturned the Electricity Reform Law No. 20/2002, ruling that according to the constitution of Indonesia, public goods including electricity must remain in public control.[39] While privatization of the Energy Generation Authority of Thailand (EGAT) has been under consideration since 1989, efforts to this end were ramped up during the Asian financial crisis. In 2004, the Thaksin government initiated new efforts to corporatize EGAT in the context of a "national champion" approach to development, expanding Thai presence in the Asia region. Steps to corporatize EGAT were reversed by the Thai Administrative Courts in March 2006. Table 2 below presents a profile of electricity in each of these four countries.

In the following analysis of electricity policy, we address the process for introducing a new legal framework and the extent of legislative debate and scrutiny of electricity reform laws. In addition, we consider the terms on which independent power production takes place, as many of these projects have been extremely controversial and have drawn attention to the challenges of private-sector participation in the sector. We then turn to the broader systems and processes that have ushered in electricity reform efforts, and review the extent to which there has been clarity about how reforms would be introduced and the scope for formal public involvement. We consider the extent to which the public has access to information about the basis for policy and reform initiatives, and opportunity for public scrutiny of the reform prescriptions. Asset valuation processes are presented as a case study of transparency and independent scrutiny of technical decisions made as part of implementing reform efforts. We also examine transparency and scrutiny of the role of private sector consultants — who tend to design and implement these "technical tasks." We then address whether environmental impacts of electricity have been considered as part of reform efforts, and the extent to which the electricity

TABLE 2 | PROFILE OF THE ELECTRICITY SECTOR

	India	Thailand	Indonesia	Philippines
Ownership / structure	The 2003 Electricity Act paves the way for introducing full competition, especially for large consumers. More than 80% of generation and distribution remains under public ownership.	Efforts to corporatize and privatize the Energy Generation Authority of Thailand reversed by courts in March 2006. "Enhanced Single Buyer Model" in place wherein more than 40% of generation from Independent Power Producers	Constitutional Courts overturn Electricity Reform Law No. 20/2002 in Dec 2004. New Electricity Reform Laws being drafted by Parliament. State-Owned Utility PLN Persero acts as single buyer of electricity from IPPs.	Electric Power Industry Reform Act (EPIRA) of 2002 introduces competition and full privatization of State-Owned National Power Corporation.
Executive body	Ministry of Power	Ministry of Energy; Energy Planning and Policy Office; National Energy Policy Council	Department of Energy and Mineral Resources: Directorate General of Electricity and Energy Utilization (DGEEU)	Department of Energy
Planning bodies	Central Electricity Authority + National Planning Commission	Energy Planning and Policy Office & National Energy Policy Council	BAPPENAS (National Development Planning Agency) & DGEEU & local government	Department of Energy
Regulatory structure	Independent Central as well as State Electricity Regulatory Commissions	An "Interim Regulatory Commission (2005)" created in anticipation of corporatization of EGAT.	Director General of Electricity and Energy Utilization regulates PLN.	An independent national Energy Regulatory Commission established under EPIRA.
Freedom of Information Act	Yes (2005)	Yes (1997)	No	Yes (included in 1987 Constitution)
Population with household access to electricity[1]	43%	82%	53%	87%
Installed generation capacity[2]	126 GW	24 GW	25 GW	16 GW
Fuel mix[1]				
Oil		40.8%	35.4%	10.3%
Coal	58%	35.3%	33.0%	25.5%
Diesel			12.74%	13.3%
Natural gas	11%	20.3%	4.86%	17.8%
Hydro	24.6		12.00%	20.7%
Renewables	6.4%	3.6%	2%	12.4%
Greenhouse gas emissions from electricity[3]	159.4 MtC 54.7 %	20.3 MtC 38.0%	32.3 MtC 36.1%	7.2 Mtc 35.4 %

1. World Bank Private Participation in Infrastructure Projects Database, http://ppi.worldbank.org/index.aspx
2. http://www.eia.doe.gov/cabs
3. WRI Climate Analysis and Indicators Tool. http://cait.wri.org/

executive has the mandate and capacity to address electricity's environmental and social aspects. Finally, we review the systems and dynamics of electricity planning, coherence, and cooperation across various institutions involved and the opportunities for the planning process to accommodate and advance public interests.

INTRODUCING A NEW LEGAL FRAMEWORK FOR ELECTRICITY

The reform laws enacted in countries across the world have ushered in enormous changes in the electricity sector – shifting both the terms on which electric power is generated and distributed, and the interface between a historically state-owned enterprise and the general public. Electricity reform efforts have often been criticized on the grounds that the same basic model (detailed in Box 1) has been applied across the board as a solution for different countries dealing with very different needs and challenges. The process for establishing a new legal framework for the electricity sector warrants deliberative debate and scrutiny by the representatives of the public elected to the legislature, in order to ensure that new laws meet national priorities.

Legislators have had the opportunity to debate electricity reform laws in all four case study countries with the exception of Thailand (see Indicator PP 7). The State Enterprise Corporatization Act B.E. 2542 introduced by the former Thai government of Prime Minister Chuan Leekpai in the context of the Asian financial crisis, gave the executive branch of the government the power to corporatize state-owned enterprises under the authority of a royal decree. The act greatly reduced the degree of legislative involvement and oversight over the electricity sector, and as a result there was no legislative debate about the decision to corporatize EGAT.[40]

In India, Indonesia, and the Philippines, the quality of legislative debate of the reform bill has been questionable. In the Philippines, not all sponsors of the reform bill could speak to the details of the bill and their implications for the country during plenary session debates. The final version of the Electric Power Industry Reform Act (EPIRA) was found to include content that was not included in the legislative debate according to a review of the transcripts.[41] In Indonesia, transcripts from meetings to develop Electricity Reform Law No. 20/2002 were only made public after the law had been passed. The Indonesia assessment team held meetings to collect public and civil

Indicator PP 7: Debate on Reform / Restructuring Law or Policy	**India** *Medium-High*	**Thailand** *Low*	**Indonesia** *Medium-High*	**Philippines** *Medium*
Law enacted through the legislature	✓	✗	✓	✓
Criteria of effective legislative process				
Adequate time for debate	✓	✗	✓	✗
Attendance of members	✓	✗	✓	✗
Duration of debate	✗	✗	✓	✓
Availability of transcripts of debate	✓	✗	✗	✓

Technical Note: Each team generates an indicator value of (i) Low, (ii) Medium-Low, (iii) Medium, (iv) Medium-High, and (v) High for each research question. The value is based on the team's appraisal of the extent to which the particular attributes of the research question have been met, and additional information that is reflected in the narrative explanation section on each indicator worksheet. The full set of indicator worksheets from all four assessments are available online at http://electricitygovernance.wri.org. Figure 1 above presents a schematic of the EGI indicator framework.

society input on the draft law, but transcripts for the meetings and hearings were not available, although transcripts from internal government meetings were publicly accessible. [42] Civil society was typically more critical of the new law than government, suggesting that the commission may have been reluctant to disclose the dissenting views that were expressed at these meetings. In addition, transcripts from legislative debates are not easily available to the Indonesian public and need to be directly requested from the energy committee and disclosed on a "case-by case" basis.[43]

GOVERNANCE CHALLENGES IN INDEPENDENT POWER PRODUCTION

Across Asia, private sector actors have been invited to build and operate power plants, and sell the electricity generated to the national utility. In the four countries, IPPs have been enormously controversial and have often been found to force the use of higher-cost power. As a result, IPPs have become symbolic of governance challenges in the electricity sector. In addition, allegations of corruption have surrounded many IPP deals, particularly given the large sums of investment and revenue involved. The electricity governance assessments show that there has been no parliamentary or legislative involvement in the development of IPP policies, except in India (see Indicator PP 21). Even in India, where a bill to amend the existing electricity law was taken up by the parliament, the amendment was not subject to more considered deliberation by a legislative committee, and received little serious discussion. The bill was debated for just one hour and passed the same day.

Although the impacts of IPPs on tariffs were analyzed by authorities in Indonesia, India, and Thailand, this analysis was neither publicly available nor subject to scrutiny. For example, in India IPPs had to be cleared for "techno-economic feasibility by the Indian Central Electricity Authority (CEA) before utilities signed power purchase agreements (PPAs); however, both the clearance documents and PPAs were treated as confidential. When these documents were eventually obtained by journalists and civil society activists, independent analysis revealed that the CEA had not considered the impacts of foreign exchange rate fluctuations or increases in fuel prices on electricity tariffs.[44] In the Philippines, the government did not conduct a tariff impact analysis. New projects have been contracted even when international donors such as the World Bank warned that new generation might lead to excessive electricity supply that the government would be obligated to purchase, and therefore might increase electricity rates.[45] In addition, there has been no public consultation or input into the IPP policy in any of the case study countries, and it is rare to have public consultations when PPAs are approved. In the Philippines and elsewhere, IPP contracts typically contain confidentiality clauses preventing the details of these costs from being disclosed to the public.

Indicator PP 21: Independent Power Production	**India** *Medium- Low*	**Thailand** *Medium-Low*	**Indonesia** *Low*	**Philippines** *Low*
Legislative involvement	✓	✗	✗	✗
Public consultation during IPP policy development	✗	✗	✗	✗
Competitive bidding	✗	✓	✗	✗
Transparent and detailed analysis of demand-supply scenario	✗	✗	✗	✗
Detailed analysis of tariff impacts available to public	✗	✗	✗	✗
Public consultation while approving PPA	✗	✗	✗	✗

IPP policies in all four countries often have been based on overly ambitious or inaccurate projections of demand for electricity, with inadequate scrutiny and transparency about the need for IPP projects and their merits from an environmental or social perspective. While rapid growth rates in demand for electricity may often justify new investment in generation, options to manage demand or increase efficiency alongside – or instead of – adding new generating capacity have received limited attention.[46]

The controversies associated with IPPs have made all stakeholders wary. Governments have sometimes had to take drastic measures in order to correct onerous contracts. For example, the Enron Dhabol LNG Plant was tied up in litigation for several years after the state government-owned utility rescinded the power purchase agreement, claiming that Enron had failed to meet its contractual obligations. Investors are apprehensive of the perceived risks of business in the sector; consumers and civil society have due cause to be concerned about the implications of IPP projects for public interests including affordability and sustainability. Although the transparency of these processes remains limited, independent scrutiny by citizens and civil society of information that was publicly available ultimately brought many of these controversies to light and helped diagnose the causes of these problems. Greater transparency and public participation in developing IPP policies, and in awarding power purchase agreements for new projects, could have helped anticipate and avoid the problematic outcomes that have caused such apprehension.

CLARITY OF THE DECISION-MAKING PROCESS AND PUBLIC PARTICIPATION

If a wide range of interests are to be represented in determining a policy change, it is important that all stakeholders understand the process by which they can contribute to decision-making. However, in India, Thailand, Indonesia, and the Philippines, only electricity-sector "insiders" – such as industry representatives and select groups or individuals invited by the government to participate – had a clear understanding of the policy or reform process.

In general, information conveying the goals, objectives, and time frame for privatization were rarely circulated with adequate lead time to stakeholders beyond the inside circle of legislators and industry players (see Indicator PP 9). For example, in the Philippines, policymakers developed a time frame for the passage of EPIRA and for public input in committee hearings, but these schedules were not observed in practice, and the government had significant leeway to change procedures without notification.[47] In Indonesia, the Power Sector Restructuring Policy Implementation Plan did lay out a process and format for reform, but there was no clarity about the time frame for developing the new law.[48] In practice, the House of Representatives and the government of Indonesia conducted eight public hearings while developing the electricity law,[49] but little effort was made to notify the public of these opportunities to participate.

In Thailand, EGAT and the Energy Policy and Planning Office (EPPO) did advertise the privatization efforts in daily newspapers, but rather than informing participants of upcoming decisions that would be debated, decisions merely were announced once they had been made. The initial process to privatize EGAT was derailed in mid-2004 by labor and public opposition, compounded by a falling stock market, but the government revived the privatization plan in early 2005. Since it had already conducted public hearings during 2004, it held that no further consultations were necessary even though the content of the privatization plan had undergone significant changes. In addition, widespread public concerns and opposition expressed during 2004 after the official hearings were neither considered nor incorporated in the 2005 privatization plan.

Indicator PP 9: Clarity about decision-making process on reforms or policy change	India *Medium-Low*	Thailand *Medium-Low*	Indonesia *Medium-Low*	Philippines *Low*
Clarity about the process				
Clarity about the decision-maker	✓	✓	✓	✗
Time-frame laid out in advance	✓	✓	✗	✓
Clear format for decisions	✓	✓	✓	✗
Time frame for public input	✗	✗	✗	✗
Specification for the use of public input	✗	✗	✗	✗
Anticipation of feedback	✗	✗	✗	✗
Specification of a mechanism for recourse	✗	✗	✗	✗
Provision for documentation of the process	✗	✗	✓	✓
Ease of access and breadth of information				
Information circulated with reasonable lead time	✓	✗	✗	✗
Information available on Internet and more than one other tool	✓	✗	✗	✗
Systematic efforts to reach out to disadvantaged communities	✗	✗	✗	✗

Although some opportunities for public participation have been included in the policy processes evaluated in the EGI assessments, mechanisms to incorporate this feedback into the policy were not built into the processes. (see Indicators PP 14 and 15). For example, in Thailand, the government's only response to the public hearings during 2004 was a document summarizing the input received, and these perspectives were not reflected in the new privatization policies.[50] In fact, questions raised at these hearings never received a response, and Thai government officials acknowledge that mechanisms to respond to public input and questions need to be put in place in the future.[51] In India, while efforts were made to structure a clear process that included public participation for developing the National Electricity Policy, in practice political changes and poor planning thwarted these efforts. In 2003, the government set up the N.K Singh Commission to develop the policy. The commission consulted a range of stakeholders including consumer groups, investors, and state utilities. However, after a new government came into place, it decided to undertake a fresh round of consultations with state governments and electricity boards, excluding broader stakeholder input that the commission had considered.[52]

The Indian government also attempted to collect public input through the website of the Ministry of Power that included a discussion board through which comments could be received, which presents a significant innovation to accommodate public participation.[53] But while the comments were submitted over the course of a year, the webmaster of the Ministry of Power did not maintain records of comments received through the website, indicating that this public input was not taken very seriously.[54] Ministry representatives reported that very few comments were received through the website. By the same token, however, very little effort was made to reach out and notify the public of this opportunity to provide input.

The EGI assessments show that for these countries there has been limited systematic space for public participation in policymaking, and little commitment

Indicator PP 14: Quality of public participation process during reform or policy decisions	India *Low*	Thailand *Low*	Indonesia *Low*	Philippines *Medium-Low*
Public notification	✗	✗	✗	✓
Public registries of documents	✗	✗	✗	✗
Communication of decisions within one month	✗	✗	✗	✗
Use of diverse communication tools	✗	✗	✗	✗
Adequate time for public consideration	✗	✗	✓	✓
Opportunity for consultation	✗	✗	✓	✓
Clear communication on the results of public participation	✗	✗	✗	✗
Outreach to vulnerable communities	✗	✗	✗	✗
Indicator PP 15: Quality of participation by stakeholders and government responsiveness	*Low*	*Low*	*N/A*	*Low*
Quality of participation:				
Quantity of input	✗	✗		✓
Breadth of input	✗	✗		✓
Responsiveness of policy maker:				
Notification of public participation by government	✗	✗		✗
Summary of public participation	✗	✗		✗
Response to public participation	✗	✗		✗

from the decision-makers and the government to accommodate meaningful participation. The failure to develop clear mechanisms by which public input would be considered – and the corresponding failure to respond to public input once collected – undermines the entire point of public participation and consultation.

PROCEDURES OF THE EXECUTIVE

Senior staff of an electricity ministry or department are charged with implementing policy and legislative decisions and have considerable latitude in interpreting these policies. The electricity governance assessments reveal that senior executive staff are generally appointed through non-transparent bureaucratic processes. In both India and the Philippines, where official criteria for appointment are in place, the Minister of Power and the President respectively have ultimate discretion over the choice of staff for senior positions. In Indonesia, although criteria for staff appointment in the executive exist, these criteria are not made public and the Minister of Energy and Mineral Resources makes the final decisions with input from the Directorate General for Electricity and the Secretary General of the Ministry.[55]

The assessments also find that there are incomplete or weak safeguards against conflicts of interest on the part of staff of the executive. In India, Thailand, and Indonesia, senior officials in the ministry do not have to disclose their links to the electricity sector (see Indicator PP3).[56] In the Philippines, however, the Secretary and Undersecretary of the Department of Energy are each required to submit a sworn statement of assets, liabilities, net worth, and disclosure of business interests and financial connections before taking their positions. Filipino law recognizes the public's right to this information (although it is difficult to access in practice). Department officials are required to resign from private-sector positions and divest their interests in electricity businesses; they also are barred from seeking employment in

Indicator PP 3: Independence of Electricity Ministry / Department	India *Medium-High*	Thailand *Medium-Low*	Indonesia *Low*	Philippines *Medium-High*
Criteria for appointment publicly available	✓	✓	✗	✓
Fixed tenure and removal procedure	✓	✗	✗	✓
Disclosure of interests	✗	✗	✗	✓
Rules about conflict of interests	✓	✗	✗	✓

electricity businesses for one year after resigning. Similarly in India, officials cannot take up commercial employment in the electricity sector for two years after leaving the ministry, although former staff have circumvented these rules by serving as consultants to electricity businesses.

The Thai assessment found that there are no provisions to protect against conflicts of interests on the part of senior members of the Ministry of Energy: key officials of the Ministry of Energy – including the permanent secretary and deputy secretary – are also on the boards of EGAT, the National Petroleum Company, and the Electricity Generating Company.[57] Key staff in the executive are apt to make decisions that favor the profitability of the companies on whose boards they serve. In fact, the Thai Administrative Court decided in 2006 to reverse efforts to privatize EGAT primarily on the grounds that there were conflicts of interest on the part of the government officials in charge.

Staffing policies need to safeguard the independence of the executive to ensure that staff are not unduly influenced by certain stakeholder groups. In the electricity sector, where business has historically been done on the basis of "confluence of interest," new rules and practices are needed to avoid the capture of institutions by vested interests.

TRANSPARENCY ABOUT THE BASIS FOR POLICY AND REFORM INITIATIVES

In any policy process, decision-making should be informed by balanced, factual input. Transparency about this knowledge base facilitates an appraisal of whether the decision was skewed toward special interests, and whether the decision was consistent with the facts of the situation or ultimately dictated by interests. The four pilot assessments found that systems for collating and transmitting information about the basis for energy policies and reforms did not exist (see Indicator PP 10).

Transparency about the basis for policies is very limited, since the background documents on which policy is framed are not available. In India, the Ministry of Power circulated the draft policy to participating stakeholders, but not the documents or data underlying the draft. Similarly, the only background documents available to the public when EPIRA was being passed in the Philippines were the House and Senate bills under deliberation.[58] While the Lower House Committee on Energy formed a technical working group to discuss the proposed reforms, public interest groups were excluded from these workshops on the grounds that reforms were too technical for them to understand.[59] In Thailand, advertisements and "public relations" pieces advancing the government position were posted in the media, without providing any detail on the basis for those positions. In fact, much less information was disclosed to the public about EGAT privatization in 2005 than had been for previous energy initiatives such as efforts to estab-

Indicator PP 10: Scope of Background Policy Information Available to the Public about Government Analysis and Stakeholder Views	India *Low*	Thailand *Low*	Philippines *Low*	Indonesia *Low*
Range of citizen, expert, and government input considered	✗	✗	✗	✗
Documents available in at least two accessible public locations	✗	✗	✗	✗
Information available prior to decision	✗	✗	✗	✗

lish a power pool and draft an Energy Industry Act, wherein the National Energy Planning Office had prepared and disseminated documents clearly stating the position of the government.[60] In none of the four case study countries were systematic efforts made to broadly circulate information about the objectives and basis for reform efforts. Public access to information about complex technical decisions has been limited. Clearly, existing levels of transparency about the basis for reform are insufficient to allow meaningful independent scrutiny of the design and likely effectiveness of electricity sector policy and reform initiatives.

DISCLOSURE, JUSTIFICATION, AND INDEPENDENT SCRUTINY OF ASSET VALUATION

Asset valuation allows for clear financial accounting of the various components of a vertically integrated utility, and is intended to allow possible purchasers to evaluate their bids. The purpose of asset valuation is to establish a fair price at which public assets may be sold or leased to the private sector, or to project the value of a stream of public services whose prices are to be regulated. From a public interest perspective, asset valuation can affect debt servicing and therefore tariff rates (if tariffs are based on costs), as well as the relative burden on the public versus the private sector. It is a technically complex exercise, and a range of standard economic models, metrics and techniques exist to guide asset valuation in a tariff regulated sector such as electricity. From a consumer perspective, there is often a bias in favor of lower valuation of assets, as this could allow lower prices. From an investor perspective, the preference tends to be for a higher determination of asset value, as this will imply greater income through higher prices. The inherent tradeoffs implied for the purposes of setting electricity tariffs make it particularly important that there be transparency and accountability in the valuation process. But the EGI case studies demonstrate that the methodology for asset valuation is seldom disclosed and rarely justified or subject to independent scrutiny (see Indicator PP17).

In the Philippines, the asset valuation process was found to be entirely non-transparent, and the methodology for valuation was not even disclosed to prospective purchasers. Credit Suisse First Boston was hired to value the assets of the National Power Corporation,

Indicator PP 17: Methodology for Asset Valuation / Balance Sheet Restructuring During Reforms	India *Medium-Low*	Thailand *Low*	Philippines *Low*
Disclosure of methodology	✓	✗	✗
Justification	✓	✗	✗
Independent scrutiny	✗	✗	✗
Public disclosure of independent scrutiny	✗	✗	✗

Technical Note: Indicator PP 17 was not completed for Indonesia. There has been limited experience with electricity asset valuation in Indonesia as a result of reversing privatization in December 2004.

but in a potential case of conflict of interest, Credit Suisse also had clients at the same time who were interested in acquiring these assets. In Thailand, the EGAT asset valuation process was conducted by a private company and reviewed by a six person committee comprising representatives of the Ministry of Energy, Ministry of Finance, EPPO, Office of the Attorney General, and EGAT. The team submitted multiple requests for information on the methods for EGAT asset valuation to each of the various agencies with no response. The Ministry of Finance eventually advised the team to request this information directly from the consulting company, but the firm did not have the Thai government's permission to disclose it.

In India, the asset valuation process for the Delhi utility was so controversial that a public interest petition was filed with the Delhi High Court challenging the valuation (the petition was eventually dismissed). The Delhi Vidyut Board's decision to use a "business valuation" approach (rather than a valuation based on the fixed assets of the utility) was widely reported in the media. The board justified this decision on the grounds that this was more appropriate for establishing the worth of the utility for future business operations, that asset stripping could not occur due to the nature of the electricity business, and that asset valuation would have taken too long. The former chairman of the Delhi Vidyut Board later observed that making the business valuation itself public would have started an unproductive and uninformed debate about whether public assets were being sold for too low a price; selling them higher would simply require higher tariffs later. Neither the decision to undertake a business valuation nor the specific mechanism was subject to independent scrutiny or debate at the time. The decision has since attracted controversy and has been the subject of a legislative investigation and an inquiry by the central government's independent auditor. An up-front debate of the basis for the valuation approach may have stemmed later criticism, even at the cost of a slower process.

THE ROLE OF CONSULTANTS

Consultants from the private sector have played a central role in designing policy changes in the electricity sector – particularly electricity restructuring. Consultants commissioned by the government – and often funded by international donor organizations – make recommendations that often determine key decisions about reform. On occasion, the nature of reform can be effectively determined even prior to the consultant's work through the terms of reference that guide the consultancy. For example, if a consultant is commissioned to do a business valuation of a utility (as in the example of New Delhi above), this has a direct impact on the determination of the price at which public assets will be sold, and therefore affects costs that will have to be recovered through tariffs.

The pilot electricity governance assessments in India and the Philippines found that there is very little transparency about how consultants are selected to support policy processes, and about their tasks or terms of reference in carrying out this support (see Indicators PP 11 and PP 12). Consultants' terms of reference are not available, nor is there any transparency about the budgets allocated for these consultancies. The consultants' reports are rarely made available to the public. For example, in the Philippines, the Asian Development Bank commissioned a consumer impact assessment for the draft EPIRA bill that was widely referenced by proponents of the bill during debates in Congress as the basis for assuring critics that consumer interests would be well served by reforms. But the study was only available to the government. The Asian Development Bank only made the study available to the general public and the bill's critics after being pressured to do so by civil society. In all four countries, there are no established procedures to independently review recommendations by consultants. In addition, the assessments show that there are no mechanisms for independent review of consultants' recommendations, to otherwise solicit broader input and scrutiny, or to assess

Indicator PP 11: Scope of Background / Supporting Information Available to Public Regarding Use of Consultants	India *Low*	Philippines *Low*
Terms of reference	✗	✗
Budget	✗	✗
Selection procedure	✗	✗
Report available	✗	✓
Ease of availability	✗	✗
Timeliness of availability	✗	✗
Indicator PP 12: Independent Review of Recommendations by Consultants	*Low*	*Low*
Provision for independent review	✗	✗
Clear process for review	✗	✗
Clear outreach strategy	✗	✗
Clear revision process	✗	✗

Technical Note: Indicators PP 11 and PP 12 were not completed by the Indonesian and Thai EGI teams.

the implications of the recommendations for stakeholder groups.

CONSIDERATION OF ENVIRONMENTAL AND SOCIAL SUSTAINABILITY IN ELECTRICITY REFORM AND POLICY

Electricity reform has significant implications for environmental and social sustainability. Without explicit attention to the environment during or after the reform processes, opportunities to achieve environmental benefits as part of the reform are likely to be missed. The pilot electricity governance assessments show that electricity reform laws and associated official documents have not given environmental issues any serious consideration (see Indicator ESA 9). In India, the Electricity Act 2003 refers broadly to the need for energy conservation and promotion of renewable energy, and the National Energy Policy stated that "environmental concerns would be suitably addressed," but these policies do not address specific issues and approaches to this end. [61]

In the Philippines, reform documents have contained relatively more specific provisions related to the environment. EPIRA required new electricity generation companies to secure certificates of environmental compliance from the Energy Regulatory Commission, in addition to health, safety, and environmental clearances from the relevant agencies. The act also called for an environmental charge as part of the electricity tariff[62] that would accrue to an environmental fund for watershed rehabilitation and management.[63] Nevertheless, in implementation of EPIRA, environmental considerations have not been mainstreamed into energy sector operations and planning.

In all countries, there has been limited access to documents related to electricity reform or opportunity for public input. Had these documents been subject to broader debate and scrutiny, stakeholders might well have raised specific environmental considerations to be addressed in the context of reform.

MANDATE AND CAPACITY TO ADDRESS ENVIRONMENTAL AND SOCIAL CONSIDERATIONS

In order for environmental and social issues to be included as an integral consideration in electricity

Indicator ESA 9: Inclusion of Environmental Considerations in Sector Reform Process	India *Medium-Low*	Indonesia *Low*	Philippines *Medium-Low*
Inclusion of environmental considerations in official documents, before reform	✗	✗	✓
Broad framing of environmental issues	✗	✗	✗
Access to documents			
Less restrictive confidentiality rules applied to reform related documents	✓	✗	✓
Adequacy of public comment period	✗	✗	✗
Effort to reach affected and less-privileged populations	✗	✗	✗
Mechanisms to seek public input	✗	✗	✗
Availability of public comments	✗	✗	✗
Communication of how public input is incorporated	✗	✗	✗

Technical Note: ESA 9 was not completed by the Thai team as the sector has not undergone major restructuring or reforms to date.

sector policy, they must be reflected in the mandate of the executive agency responsible for the electricity sector. Accordingly, the executive must also have the capacity to address environmental and social aspects of the electricity sector. The electricity governance assessments suggest that environmental and social considerations are increasingly recognized as falling within the mandate of the electricity sector executive.

In the Philippines, certain provisions of the EPIRA and the act that establishes the Department of Energy (DoE) call for the sector to be environmentally friendly and begin to outline how the DoE will cooperate with the Department of Environment and Natural Resources to ensure that environmental standards are met.[64] In Indonesia, the main document describing the functions of the Directorate General of Energy and Electricity Utilization (DGEEU) provides a general explanation of social and environmental responsibilities, and the directorate has divisions responsible for environmental sustainability and safety and a department responsible for addressing social considerations, including consumer service and protection.[65] Although there is no mention of environmental impacts in the charter of the Ministry of Power in India,[66] the 2001 Energy Conservation Act does establish some environmental responsibilities for the Ministry.[67] The executive bodies also make limited efforts to report on the environmental and social performance of the sector, leading to a dearth of accurate information on this count. For example, the latest status reports on implementation of EPIRA do not include any information on environmental aspects such as carbon dioxide emission levels, the nature of the energy mix, or development of clean energy options (see Indicator ESA 2).

Somewhat surprisingly, the EGI assessments suggest that there is greater capacity to address environmental and social aspects of the electricity sector than one might expect given the weak environmental and social outcomes in the four countries. In India, the Ministry of Power has set aside a share of its budget for limited social and environmental objectives, including rural electrification and energy conservation.[68] The DGEEU of Indonesia was also found to include staff with specialized backgrounds in environmental issues as they pertain to the power sector,[69] and to offer its staff periodic opportunities for training in environmental issues and environmental impact assessments at the Energy and Electricity Training Centre.[70] In the Philippines, several mid- and senior-level staff of the DoE have been through the Master in Public Management Program

Indicator ESA 2: Clarity and Transparency of Executive's Environmental and Social Mandate	India *Medium*	Thailand *Low*	Indonesia *Medium-Low*	Philippines *Medium-High*
Reference to environmental and social performance of sector in description of responsibilities of executive	✓	✓	✓	✓
Guidance on how executive will cooperate or consult with regulators or other authorities	✓	✗	✗	✓
Commitments to information disclosure				
Reporting on ESA of performance of electricity sector	✗	✗	✗	✗
Availability of documents on executive's environmental and social responsibilities	✗	✗	✗	✗
Availability of these documents in a range of forms	✗	✗	✗	✓
Dissemination using various media/outlets	✗	✗	✗	✗
Efforts to educate marginalized socioeconomic or cultural groups	✗	✗	✗	✗
Indicator ESA 4: Executive's Capacity to Evaluate Environmental and Social Issues	*High*	*N/A*	*High*	*High*
Specific budgetary resources to support social and environmental issues	✓		✓	✓
Existence of dedicated staff	✓		✓	✗
Expertise of staff	✓		✓	✓
Availability of training	✓		✓	✓

administered by the Development Academy of the Philippines, which includes coursework in Environmental Management, Dimensions of Sustainable Development, and Social Development. More than 60 staff members of the DoE and attached agencies are expected to participate in the Development Academy of the Philippines' specialized Master in Public Management Program for Educational Advancement of Governance Leaders in Energy, a curriculum with a strong emphasis on environmental and social sustainability (see Indicator ESA 4).

These findings suggest that mainstreaming environmental and social considerations into the power sector may be more feasible than many assume, but special efforts will need to be made to expand the scope of attention to environmental and social impacts, in order to address the major environmental and social challenges that confront the sector at present.

In all four countries, Environmental Impact Assessments (EIAs) remain the sole procedural mechanism by which the rights of project-affected people are considered (Box 3 addresses the particular case study of the Pemaron LNG Power Plant in Indonesia in further detail). In the Philippines, while there are comprehensive requirements for consultation with local communities in developing projects, the record of implementation of these requirements remains uneven. While the Thai constitution provides that project-affected people have the right to participate in project decisions, there are no laws or procedures to facilitate implementation of this provision. In India, consultations with project-affected people are not required under the EIA guidelines and procedures. In fact, provisions to include project-affected people in EIAs have been weakened significantly over the past decade. While a public hearing is held after the EIA has been completed, there are no requirements to include or consult project-affected people in conducting

Indicator ESA 11: Comprehensiveness of Environmental Impact Assessment (EIA) Policies, Laws, and Procedures	India *Low*	Thailand *Low*	Philippines *Low*
National or electricity sector laws and policies are in place that specify or require EIAs for electricity sector activities	✓	✓	✓
Electricity sector policies, regulations, or guidelines detail for project level EIA	✗	✓	✓
Electricity sector policies, regulations, or guidelines detail for project-level social impact assessment	✗	✗	✗
Strategic assessments have been carried out to evaluate environmental or social objectives	✗	✗	✗
Strategic assessments have been carried out to evaluate both environmental and social objectives	✗	✗	✗
Strategic assessment guidelines for electricity sector programs, plans, and policies	✗	✗	✗

Technical Note: Indicator ESA 11 was not completed by the Indonesia team

BOX 3 **THE PEMARON EXPERIENCE IN INDONESIA**

Civil society and public interest in electricity sector issues has often been prompted by controversies around major infrastructure projects. Yet the electricity governance assessments suggest that despite these controversies, there is limited space to protect the rights of people affected by electricity infrastructure projects. The Pemaron PLTCU Natural Gas Plant in Bali speaks to the inadequacies of these systems. The plant was expected to have damaging effects on local aquatic tourism. In addition, it did not comply with official guidelines for development in the region. But project-affected people and communities were not consulted in the initial project development and impact assessments. In fact, construction began without local authorities even issuing a permit for the project.

The environmental impacts of the Pemaron Plant – in an area renowned for its attractions as a tourist destination – attracted a great deal of concern from local communities and business representatives who were concerned about the effect on tourism. A People's Coalition for the Pemaron Problem was established to coordinate public input and file complaints about the project. The coalition included local community associations such as the Indonesia Hotel and Restaurant Association and the Darma Samudra Fishermen's Association, as well as national NGOs such as the Working Group on Power Sector Restructuring. In the Pemaron case study, the DGEEU insisted that authority for the project lay with the local government. DGEEU only took on the role of facilitator between civil society and local authorities rather than creating avenues or mechanisms to uphold the rights of project-affected people. Local authorities refused to recognize that project-affected people had any standing to raise claims against the Pemaron Plant.

Indicator PP 6: Distinct Planning /Policy Agency	India *Medium-High*	Thailand *Medium-Low*	Indonesia *Low*	Philippines *Low*
Existence of planning/policy agency	✓	✓	✗	✗
Mechanism for consultation by executive	✓	✗	✗	✗
Authority to seek information	✓	✗	✗	✗
Availability of resources	✓	✗	✗	✗
Requirements for transparency	✗	✗	✗	✗
Requirements for consultation (from stakeholders)	✗	✗	✗	✗
Indicator ESA 8: Inclusion of Environmental Considerations in National Power Sector Plan	*N/A*	*Medium-Low*	*Low*	*Medium-Low*
Analysis of environmental considerations in most recent plan		✓	✓	✓
Inclusion of project-specific impacts and broader sectoral impacts		✗	✗	✗
Public access to relevant documents				
Mechanisms to seek public input		✗	✗	✗
Inclusion of less-privileged and affected populations		✗	✗	✗
Communication about how public input is incorporated		✗	✗	✗
Reasonable public comment period		✗	✗	✗
Availability of public comments		✗	✗	✗

the EIA. There are no clear systems by which input collected at these public hearings affect the final decision on the project. Without this critical loop, this forum for public input has limited utility.

THE PLANNING PROCESS: A LEVER TO INCORPORATE PUBLIC INTERESTS?

There is limited space for public participation and input to be incorporated into electricity planning; in all four case study countries, even though capable independent planning agencies exist in Thailand and India (see Indicator ESA 8). In addition, the trend toward regional integration raises new challenges for electricity governance (see Box 4).

In the Philippines, development of the Energy Plan included regional consultations with stakeholders, but no overarching assessment of stakeholder perspectives and inputs on the plan was completed, and it is not clear how the input that was collected was incorporated into the final plan.[71] However, as Box 5 details, at the local government level collaboration with civil society and citizen groups has allowed Negros Province to adopt an integrated energy plan that prioritizes clean energy. In Indonesia, while the electricity law states that "the government is obligated to consider the thinking and opinions of the public"[72] in electricity sector planning, the law does not anticipate how to include, accommodate, or respond to input from the public in practice.[73] The implementation of this principle of public participation has therefore been quite limited.

In Thailand and India – where independent planning bodies with significant analytical and technical capacity do exist – the recommendations of these planning agencies are not always given due weight or consideration and are not enforceable (see Indicator

BOX 4 | TRANSBOUNDARY REGIONAL INTEGRATION RAISES NEW GOVERNANCE CHALLENGES

Regional integration of electricity presents new challenges for governance from a public interest perspective. The controversies around the construction of the Nam Theun II hydroelectric dam in Laos, which will supply electricity primarily to Thailand, and efforts to develop a regional power grid and electricity trading system in the Mekong region have shone a spotlight on these challenges. Many countries in the Mekong region are not democracies, have demonstrated little commitment to citizen concerns or accountability, and have troubling records of human rights violations. Regional integration in the Mekong therefore raises some difficult questions from a democratic governance perspective. International organizations, such as the Asian Development Bank and the World Bank, have been actively involved in the Mekong regional integration and have attempted to set up systems to consult the public, but these systems have their limits.

Putting aside the particular challenges of the Mekong countries, regional integration raises systematic questions about who has voice in electricity decision-making when foreign governments make choices that affect citizens to whom they are not accountable. While meeting Thai demand for electricity has very real implications for stakeholders outside Thai national borders, impacts on citizens of Mekong countries – such as Lao, or Vietnam – are not factored in to Thai electricity planning processes.

Similarly, state-owned utilities are increasingly involved in electricity sectors beyond their national boundaries. The Electricity Generation Authority of Thailand is expanding its presence throughout the Asia region from Vietnam to the Philippines. The National Thermal Power Corporation in India now has holdings in Sri Lanka. Such national enterprises are able to make investments in infrastructure in regions that present high economic, social, or environmental risks. While these companies may make such investments without directly exposing their domestic balance sheets, the reality is that national utilities have easier access to cheap capital on the strength of their national assets and the reliable captive economic base provided by domestic consumers in their country of origin.

Regional integration certainly presents many significant benefits to people and for economic development: It can create new employment and trade opportunities, improvements in transportation networks, and water sharing and help address conflicts related to waterways and public health management. But systems for voice and accountability at the national level are not adequate to address the challenges that may also arise from regional integration. The electricity governance initiative assessments point to regional issues as a critical area for future work.

PP 6). While EPPO of Thailand acts as the secretariat of the National Energy Planning Council, policy planning is carried out directly by the Ministry of Energy without any conditions or procedures that require the Ministry to formally consult with EPPO or respond to its recommendations.[74] The Permanent Secretary of the Thai Ministry of Energy has in fact set up an internal office, with support from international consulting groups to study the options for sector reform that coordinated initiatives such as the National Energy Strategy.[75] Although the CEA in India is the lead technical advisor to the National Planning Commission on electricity issues and has significant authority to seek information, its recommendations are not binding on the government. The annual reports of the Ministry of Power only mention CEA recommendations that have been adopted, so there is little transparency about the basis on which recommendations

BOX 5 | CITIZEN PARTICIPATION CREATES A NEW CLEAN ENERGY MODEL IN THE NEGROS PROVINCE OF THE PHILIPPINES

In 2002, the Governor of Negros Occidental province and the Secretary of the Department of Energy (DOE) in the Philippines committed to a 100% renewable energy target for Negros province. The announcement came after eight years of heated debate about whether to build coal-fired power plants in Negros or to prioritise renewable energy solutions to the province's energy needs.

Civil Society Provided New Research and Analysis to Inform Decision-Making

When the Central Negros Electric Cooperative (Ceneco) announced its intention to build a 50-Megawatt coal-fired power plant in Negros Province in 1997, a process of public consultation prior to starting construction was initiated. The plant was contracted to the Edison Global company, in collaboration with the Central Negros Power Corporation and two other multinationals, Ogden Energy and Asea Brown Bover. Independent research and engagement by civil society organisations with support from technical experts found that the power plant was to be constructed on a river delta and that the coal ash and effluents were likely to disrupt the water system and impact fishermen in particular. The plant was also expected to have serious negative impacts on local health, particularly since there were no plans to manage the dumping of fly ash from the plant. Pulupandan had been the site of a highly polluting alcohol plant for many years, and residents were very concerned about a new facility that would have additional environmental health impacts.

Citizen Organization and Public Participation through Formal and Informal Systems Drew Attention to Problems and Conflicts

The project met with widespread public opposition. In Pulupandan, a small group of women began mobilizing the town's residents to question the construction of the coal-fired power plant, drawing more and more volunteers and eventually organising itself as a formal NGO. Despite alleged attempts by some project developer representatives and government authorities to prevent their participation in consultations, the group prepared educational materials about the project and mobilized residents to participate in discussions about the need for the plant. They submitted a formal critique of the project to the Department of the Environment and Natural Resources (DENR), documenting the project developers' failures to comply with the conditions upon which an Environmental Compliance Certificate (ECC) should be issued. The DENR eventually responded by revoking the ECC for the project.

might have been disregarded. In general, anecdotal evidence suggests that advice on technical matters is taken more seriously than financial and economic recommendations.

Electricity planning can function as a lever to incorporate public interests, but there are serious challenges in ensuring public accountability and effective action. It is important to create space for a broad range of interests in these processes.

INCOHERENCE IN ELECTRICITY PLANNING AT VARIOUS INSTITUTIONS AND LEVELS OF GOVERNMENT

The fact that independent planning agencies are weak or do not exist, and that electricity sector planning occurs at multiple levels, results in the lack of a coherent plan for electricity. The assessments find that in Thailand and Indonesia, where the national utilities EGAT and PLN PT Persero operate under

BOX 5 | CONTINUED

Civil Society and Official Sector Actors Designed Innovative Clean Energy Solutions to Electricity Supply Challenges

Rather than simply opposing the construction of new coal-fired power capacity, civil society and local government authorities were able to work together to consider the downsides of coal power and the advantages of developing new renewable energy projects such as wind, solar, small hydro, and modern biomass under this new local policy framework. Organisations including the Philippines Rural Reconstruction Movement, Preferred Energy, the International Institute for Energy Conservation, World Wildlife Fund,, and Greenpeace worked with DOE and local Negros government officials to develop a detailed alternative energy plan for Negros Province, with an emphasis on off-grid clean energy options for isolated communities. They also set up a new program to execute this integrated plan: the Green Independent Power Producers Program (GRIPP), which partners with private sector actors to develop new clean energy projects. Ceneco and GRIPP are working together to develop a wind farm in Pulupandan on the same land that would have been the site of the coal plant. In addition, GRIPP is working with the First Famers Holdings sugar mill in Talisay city to set up a 30 MW biomass cogeneration plant.

The DOE has declared Negros a model for 100% clean energy-based development in the Philippines. Under its Renewable Energy Framework, the DOE is promoting the GRIPP program as a model for encouraging greater private sector participation in the development of renewable energy resources, energy efficiency initiatives, and strategic integrated public-private energy planning.

Sources

Drillisch, Jens, ed. *EnergyPolicy Framework Conditions for Electricity Markets and Renewable Energies: 21 Country Analyses.* GTZ, 180.

Green Renewable Independent Power Producers, Inc. 2004. *Resistance in Pulapandan: No More Coal.*

Negrosanons against the Coal-Fired Power Plant and People of Pulupandan against the Coal-Fired Power Plant, *Opposition to the Granting of ECC to the Central Negros Power Plant* – Submission to DENR. http://www.bwf.org/bk/pamayanan/pulupandan.html)

a single-buyer model, there is little coordination between the planning process at the ministry level and the utility level. In fact, even though the ministries have authority to approve the plans developed by the utilities, the utilities' plans are often inconsistent with the plans developed by the technical staff in the ministries. In Thailand, for example, while the Ministry of Energy set a target to increase the share of renewable energy in total energy consumption to 8%, in its energy plans, it approved a planning document from EGAT that would generate only 1% of electricity from renewable sources.[76]

In Indonesia, this situation is compounded by the fact that Electricity Reform Law No. 20/2002 also called for electricity planning at the regional level. In the period between the enactment of the electricity law and its revocation by the constitutional court of Indonesia, several provinces did draft regional electricity plans. However, the law and its implementing regulations did not set up an integrated plan-

ning procedure for how the regional plans would be developed and relate to each other, and these regional strategies were often inconsistent with the national plans. A survey by the Indonesian NGO Pelangi (2003-2004) in the Lampung metropolitan area revealed that the regional division of the Ministry of Energy was not even aware that a regional electricity plan had been developed.[77]

In India and Indonesia, the power sector plans make limited mention of environmental and social considerations.[78] By contrast, the Philippines Energy Plan (PEP) 2002-2011 does include a detailed set of energy-environment indicators, including measurements of carbon dioxide emissions, levels of new and renewable energy in the total energy mix, and emissions avoided through energy efficiency programs. The plan seeks to reduce environmental impacts from the energy sector through the promotion of alternative supply options – including switching from fossil fuels to renewable energy but also emphasizing local fuels, which may include low-grade coal, in the interests of energy security. The plan seeks reductions of air and water emissions, improvements in mechanisms to monitor compliance with environmental regulations, and environmental legislation and policies to ensure coordinated implementation of the PEP.

Greater public awareness of the nature of the planning process and the considerable stakes at hand is needed. Planning processes often lack both credibility and resources; civil society can play an important role in demanding both these qualities.

4

THE REGULATORY PROCESS

BALANCING STAKEHOLDERS AND ALIGNING INTERESTS

Regulatory bodies are responsible for licensing power plants and other infrastructure and for setting service and efficiency standards. They play an important role in addressing considerations such as extending universal and high quality access to electricity and managing the impacts of power generation on the environment — particularly by facilitating the entry of clean renewable energy technologies — and affected communities. Good regulatory governance can also provide scope for expression of consumer and citizen concerns. As such, regulatory processes structure and manage economic, financial, social, and environmental aspects of electricity performance.

Independent regulatory commissions have been operational in India and the Philippines for several years (see Indicator RP 1). The term "independent" regulatory body is used in a limited sense to denote the existence of a separate quasi-judicial body responsible for oversight of the electricity sector, outside the direct control and structure of the executive although ultimately accountable to the executive and legislative branches.

Establishing an independent institution to regulate electricity can bring critical processes out into the open, significantly enhance transparency, and play an important role in coordinating public interests in electricity. Nevertheless, establishing an independent institutional structure does not alone create an effective regulatory regime. It is all too easy for an "independent" institution to be captured by political or other vested interests. The effectiveness of an independent regulator hinges on good governance, including mechanisms to preserve autonomy and bureaucratic checks and balances that sustain authority without overly infringing on public policy processes or mandates. Clear nominating procedures for staff and commission members to ensure their competence and commitment are essential, as is the need to ensure adequate levels of disclosure and transparency in daily decisions and operations and to create formal space to include citizens and the public.

The first Indian electricity regulatory commission was established in the state of Orissa in 1997. By 1999, a national regulator had been established under the Electricity Regulatory Commissions Act (1998), and state regulators had been set up in many states. This approach was affirmed in the 2003 National Electricity Act, and by 2004 most Indian states had established independent regulatory commissions (SERCs). For this study, we examined and report on regulators in three states – Andhra Pradesh, Tamil Nadu, and Haryana – because it was not within the scope of this initiative to assess governance in all 25 SERCs. An Energy Regulatory Board had existed in the Philippines since 1987. In 2001, the passage of EPIRA established an independent Energy Regulatory Commission (ERC) with responsibility for electric-

ity. The EGI indicators of regulatory governance were applied to these functioning regulatory agencies.

While Indonesia's 2002 electricity reform law called for the creation of an independent regulatory body, the decision to revoke the law has halted all efforts to this end. The EGI indicators were therefore used to assess the DGEEU within the Ministry of Energy and Mineral Resources, which is responsible for many regulatory functions including setting tariffs for electricity. The electricity industry in Thailand is in transition. Until recently, the regulatory functions of tariff setting, demand forecasting, and capacity addition were carried out by the Ministry of Energy. In 2005, the legal structure for an interim Electricity Regulatory Committee was established by the Office of the Prime Minister, anticipating the creation of a permanent regulatory body after the development of a Thai Energy Industry Act. Although the committee would have authority for many regulatory functions, it was not a fully independent body and lacked any judicial powers. The Thai electricity government assessment addresses the governance provisions for this interim regulatory committee, using the applicable indicators of regulatory process. Recruiting members to the regulatory committee proved difficult, and the committee became operational only after the planned date of EGAT privatization in November 2005. Following the administrative court's ruling to reverse corporatization of EGAT in March 2006, the future structure of regulation in Thailand remains uncertain.

This section of the report appraises accountability in the regulatory process. It considers the extent to which regulators have the authority and jurisdiction to be effective. We look first at the selection process for regulators and commission members and at conflicts of interest in the process. We then address the extent to which there is formal scope for public involvement and participation in the regulatory process, and the extent to which the regulator conducts outreach to weaker and socio-economically vulnerable groups. Provisions for transparency and the degree to which regulatory information in the public domain can be obtained in practice – and transparency provisions are operationalised – are considered. Finally, we reflect on the mandate and capacity of regulators to consider environmental and social aspects of electricity, including poverty.

STRENGTHENING ACCOUNTABILITY

The independent regulatory commissions of India and the Philippines operate within a framework of rules and procedures, which provide a significant degree of clarity about how regulatory decisions will be made.[79] Regulatory orders must also justify the regulator's decision.[80] This procedural certainty combined with the availability of reasoned regulatory orders can provide a basis for enhanced accountability in the regulatory process. The accountability of regulators in these two countries is further strength-

	India					
Indicator RP1: Institutional Structure for Regulatory Decisions	**Andhra Pradesh** *High*	**Haryana** *High*	**Tamil Nadu** *High*	**Thailand** *Medium*	**Indonesia** *Low*	**Philippines** *High*
Through executive	✗	✗	✗	✗	✗	✗
Through independent commission	✓	✓	✓	✓	✗	✓
Functions / Jurisdiction of the Regulatory Body	*High*	*High*	*High*	*Medium-Low*	*Low*	*Medium*
Clarity about functions / jurisdictions	✓	✓	✓	✓	✗	✓
Entrustment of all critical functions	✓	✓	✓	✗	✗	✗

ened by allowing regulatory decisions to be appealed in higher judicial forums. In India, the Electricity Act of 2003 created a specialized Appellate Tribunal to consider appeals of SERC orders. In the Philippines, appeals can be filed before the Court of Appeal or Supreme Court, depending on the grounds on which the regulatory order is being questioned. Clarity about how decisions will be made can enhance stakeholder confidence in the regulatory process and can support effective participation.

In both countries, the scope of appeal is quite wide: Both the facts of a regulatory decision and its legality can be questioned. Any affected or interested party has the right to appeal a regulatory decision.[81] For example, in the Philippines, civil society organizations have successfully challenged two regulatory decisions in the Supreme Court, on the grounds that the regulatory commission did not comply with prescribed procedures for tariff revision, which required "better" public participation and input, as well as higher levels of transparency about the basis for the new tariff than had been the case. Such provisions significantly enhance the accountability of the regulatory body. By contrast, in Thailand, the laws that set up the "interim regulator" did not provide for mechanisms to appeal regulatory decisions (see Indicators RP 7 and 10 below).[82]

The pilot assessments of electricity governance suggest that there is significantly greater accountability and procedural certainty in regulation when it is carried out by an independent body, as compared to the executive. Creating a provision for appeal of regulatory decisions can provide a basis for strengthening direct accountability to stakeholders.

AUTHORITY AND JURISDICTION OF THE REGULATOR

Independent regulatory bodies often have significant authority and jurisdiction over the electricity industry. In India and the Philippines, regulatory bodies have legal authority comparable with the authority of civil courts to seek information, investigate matters, and conduct proceedings such as summoning witnesses in deciding compliance. They award licenses, stipulate standards for quality of supply and consumer service, and set electricity tariffs (see Indicators RP 2 and 3).[83]

The electricity governance assessments in India, Thailand, and the Philippines reveal that there is inadequate transparency in the selection of members to the regulatory body. Even though members and chairpersons of Indian SERCs are selected by a

Indicator RP 7: Appeal Mechanism	**Andhra Pradesh** *High*	**Haryana** *High*	**Tamil Nadu** *High*	**Thailand** Low	**Indonesia** *N/A*	**Philippines** *High*
Permission to appeal	✓	✓	✓	✗		✓
Clarity about grounds of appeal	✓	✓	✗	✗		✓
Filed by any affected party	✓	✓	✓	✗		✓
Before another authority or forum	✓	✓	✓	✗		✓
Indicator RP 10: Procedural Certainty about Regulatory Process and Decisions	*High*	*High*	*High*	*N/A*	*N/A*	*High*
Clear, well laid-out rules of procedure	✓	✓	✓			✓
Clear, well laid-out rules for substantive decision-making	✓	✓	✓			✓

Indicator RP 2: Authority of the Regulatory Body	Andhra Pradesh *High*	Haryana *High*	Tamil Nadu *High*	Thailand *Low*	Indonesia *Medium*	Philippines *Medium-High*
Seek information	✓	✓	✓	✗	✓	✓
Investigations	✓	✓	✓	✗	✓	✓
Penalizing defaulters	✓	✓	✓	✗	✗	✓
Enforcement of orders	✓	✓	✓	✗	✗	✗
Indicator RP 3: Functions / Jurisdiction of the Regulatory Body	*High*	*High*	*High*	*Medium-Low*	*Low*	*Medium*
Clarity	✓	✓	✓	✓	✗	✓
Authority for critical functions	✓	✓	✓	✗	✗	✗

committee, the names of short-listed candidates and the basis on which final members are chosen are not made public. State governments have also maneuvered around the recommendations of the selection committee; for example, the state government did not agree with two of the selection committee's nominations to the Tamil Nadu Electricity Regulatory Commission in 2001 and therefore decided to set up a new selection committee.[84] In the Philippines, the President directly appoints the members and chairperson of the regulatory commission. In Thailand's "interim regulator" structure, the Energy Minister and the Prime Minister have direct roles in appointment of regulatory commission members (see Indicator RP 4).

CONFLICTS OF INTEREST

The EGI pilot assessments show that the legal framework for regulation in India, the Philippines, and Thailand anticipates the possibility of conflicts of interest and includes provisions to prevent such conflicts from arising. The Indian Electricity Act 2003 puts the onus for preventing conflicts on the selection committee, which "shall satisfy itself that such person (short listed candidate) does not have any financial or other interest which is likely to affect prejudicially his functions as chairperson or member, as the case may be."[85] It further stipulates that retired members of the regulatory commission cannot accept commercial employment in the electricity sector or related busi-

Indicator RP 4: Selection of Regulatory Body Members	Andhra Pradesh *Medium-High*	Haryana *Medium*	Tamil Nadu *Medium-Low*	Thailand *Medium-Low*	Indonesia *N/A*	Philippines *Medium-Low*
Independence	✓	✓	✗	✗		✗
Well-defined procedure	✓	✗	✓	✓		✗
Transparency	✗	✗	✗	✗		✗
Composition and eligibility criteria	✓	✗	✗	✓		✓
Differing tenures	✓	✓	✓	✗		✓
Indicator RP 5: Conflict of Interests of Regulatory Body Members	*High*	*High*	*High*	*Medium*	*N/A*	*Medium*
Legal recognition of conflict issues	✓	✓	✓	✓		✓
Adequate preventive provisions	✓	✓	✓	-✗		✗

nesses for at least two years. No such provisions exist in Thailand or the Philippines. But the Philippines' EPIRA requires that members of the regulatory commission as well as their close relatives[86] be prohibited from holding any beneficial interests in the electricity industry or related businesses.

The electricity governance assessments attest that the process for selecting regulatory body members and chairpersons is not transparent and is highly susceptible to political interference of the executive. Given the regulatory body's significant jurisdiction and authority, it is essential that the process for selecting its members be transparent and credible in order for the body to operate in an impartial manner and with competence.

PUBLIC PARTICIPATION IN THE REGULATORY PROCESS

Effective public participation can enable the consideration of a diverse range of perspectives in regulation and reduce opportunities for regulatory capture by facilitating direct accountability to citizens.[87] The Indian Electricity Act 2003 requires electricity regulatory commissions to ensure "transparency" in exercising their powers and to issue a public notice of proceedings such as tariff revisions and licensing, inviting comments and suggestions from the public. In addition, all proceedings before the commission must be open to the public.[88] Indian citizens therefore have a legal right to attend all regulatory proceedings and represent their perspectives in certain critical proceedings.[89] In the Philippines, EPIRA requires the regulator to issue public notice and conduct public hearings when setting tariffs. There are no explicit provisions to enable public participation in other proceedings, however. In Indonesia, although the Electricity Law No. 15/ 1985 that currently governs the sector stipulates that public views need to be considered in all electricity sector planning, this provision is ineffectively implemented in the absence of clear operating regulations and systems to collect public input (see Indicator RP 14 below). Creating systems to support direct public participation in the regulatory process holds the possibility of making regulation more responsive to public interests and concerns.

INCLUDING WEAKER AND SOCIO-ECONOMICALLY VULNERABLE GROUPS

The India and Philippines assessments show that there are no institutional mechanisms that specifically address the need for representation of the interests of weaker and poorer segments of the public in the regulatory process. In India, the 2003 Electricity Act allows regulatory commissions to appoint "consumer representatives" to represent the perspectives of so-

Indicator RP 14: Space for Public Participation in the Regulatory Process	**Andhra Pradesh** *Medium-High*	**Haryana** *High*	**Tamil Nadu** *Medium-High*	**Indonesia** *Medium*	**Philippines** *Medium*
Open proceedings	✓	✓	✓	✗	✓
Public right to participate	✗	✓	✗	✓	✓
Indicator RP 15: Institutional Mechanism for Representation of Interests of Weaker Sections/ Stakeholders	*Low*	*Medium-Low*	*Low*	*Medium*	*Low*
Routine consideration of input	✗	✗	✗	✓	✗
Opportunities to consider ad hoc input	✗	✓	✗	✗	✗
Availability of diverse institutional structures	✗	✗	✗	✓	✗

cio-economically disadvantaged groups in regulatory proceedings.[90] But none of the three states assessed in the Indian Electricity Governance Assessment had appointed such a consumer representative. In practice, staff members of the regulatory commission occasionally take it upon themselves to intervene in proceedings on behalf of poorer consumers. Poorer groups are unlikely to have the resources or capacity to represent themselves through regular opportunities for public input. In the absence of formal representatives that will speak for consumers — particularly poorer groups — public intervention in the regulatory process remains limited and ad hoc.

There is nevertheless significant civil society capacity and interest to be involved in regulation (see Box 6). In India, Thailand, and the Philippines, neither the regulatory body nor any other government agency has taken any steps to build the capacity of consumer groups, civil society organizations, and individuals to be involved in the regulatory process.

BOX 6 | CIVIL SOCIETY CAPACITY TO ENGAGE IN REGULATION

In all four countries assessed in this phase of the electricity governance initiative, there are at least a few organizations that have demonstrated significant understanding of regulatory issues and have intervened in the regulatory process seeking to advance public interests. The Freedom from Debt Coalition in the Philippines, for example, has successfully appealed ERC decisions to raise electricity tariffs for low-income consumers before the Supreme Court of the Philippines. Thai civil society groups such as Palang Thai have drawn public attention to the importance of establishing an independent and effective regulator to balance public and commercial interests.

But civil society interventions remain ad hoc and are generally limited to engagement in electricity tariff decisions. Civil society has rarely engaged the regulator on key issues such as the need for integrated resource planning, power plant licensing, or the uptake of renewable energy technologies. This is in part due to the limited capacity and resources of civil society organisations.

BUILDING REGULATORY CAPACITY TO DEAL WITH A SECTOR IN FLUX

The complex nature of the electricity sector, made more complex by the rapid changes in ownership and management and by the growing understanding of associated social and environmental challenges, requires electricity regulators to balance a range of often conflicting interests.

Some governments have responded to these challenges by investing in the responsive capacity of their staff. In the Philippines, EPIRA requires the ERC to establish rigorous training programs and enhance the technical competence of regulatory members and staff. In both the Philippines and India, multilateral and bilateral agencies such as the World Bank, Asian Development Bank, the United States Agency for International Development, and the UK Department for International Development are the main source of support for training and capacity building for regulators. Such capacity-building activities often reflect a narrow set of perspectives on industry structure, the role of government, and efficiency and equity considerations. Although Indian regulatory members and staff participate in numerous training courses and conferences, the opportunities for such knowledge are ad hoc (see Indicator RP 8).[91] It is important that regulatory members and staff have access to opportunities to build their expertise and capacity to deal with these complex issues.[92]

Indicator RP 8: Training of Regulatory Body Members and Staff	Andhra Pradesh *Medium*	Haryana *Medium*	Tamil Nadu *Medium*	Philippines *Medium-High*
Certainty and regularity	✗	✗	✗	✓
Diverse fields of training (legal, technical, and financial)	✓	✓	✓	✓
Diversity of perspectives	✗	✗	✗	✗

OPERATIONALIZING TRANSPARENCY IN REGULATION

The credibility of the regulatory process hinges on its transparency. Legal requirements to disclose information only support transparency if that information is actually accessible by the public. The EGI indicator toolkit assesses whether there are "user-friendly" mechanisms to operationalize transparency provisions that exist in the law (see Indicators RP 12 and 13). While electricity laws in the Philippines and Thailand do not include explicit provisions that require regulatory bodies to make documents in their possession available to the public, constitutional provisions and freedom of information laws do uphold public rights to these documents. In Indonesia, the criteria for making specific documents public or confidential are not well defined, and there is no right to information. The decision as to whether the document will be disclosed rests with DGEEU staff.[93]

The legal framework for regulation in India has strong provisions to uphold transparency. The Indian Electricity Act 2003 specifically requires that the "the Central Commission shall ensure transparency while exercising its powers and discharging its functions."[94] Further, operating regulations of the SERCs stipulate that all documents in the possession of the regulatory body are to be treated as public, unless they are specifically declared to be confidential by a written order of the commission. India's recently enacted 2005 Right to Information Act also requires that most documents in the possession of the regulator be public and lists specific cases (such as national security) in which information can be withheld from consumers.

Indicator RP 12: Disclosure of documents in possession of regulator	Andhra Pradesh *Medium*	Haryana *Medium-High*	Tamil Nadu *Medium*	Thailand *Medium-High*	Indonesia *Medium*	Philippines *Medium*
Legal provisions	✗	✓	✓	✓	✗	✓
Operating procedures	✗	✗	✓	✗	✗	✗
Indicator RP 13: Procedure for public access to regulatory documents	*Medium*	*Medium*	*Medium-Low*	*Medium*	*Low*	*Medium-Low*
Well-indexed database of documents	✗	✗	✗	✓	✗	✗
Simple, well-defined procedure for inspection	✓	✓	✓	✗	✓	✗
Reasonable cost	✓	✓	✓	✓	✗	✓
Wide dissemination of information	✗	✗	✗	✗	✗	✗

However, when it comes to operationalizing access to documents that are in the public domain, the assessments show that none of the four case study countries have fully implemented adequate measures. Regulators had largely failed to create document indexes or databases or to establish a simple and well understood procedure for procuring documents at a reasonable cost. In Thailand, there is no clear procedure for accessing documents pertinent to the regulatory process although there are comprehensive indices of these documents. By contrast, in India, while documents can be requested at the ERC offices and copied at a reasonable cost, most people are not aware that they can have access to these documents, and more importantly there are no indices or databases to help identify pertinent documents. In the absence of these practical operational mechanisms, legal provisions to maintain transparency in the regulatory process are rendered ineffective.

INTEGRATING ENVIRONMENTAL AND SOCIAL CONSIDERATIONS WITH ELECTRICITY REGULATION

Many regulatory decisions such as approving licenses for power plants, setting performance standards for service, and even electricity pricing have considerable environmental and social impacts. In all four EGI countries, environmental regulators are tasked with certifying that the direct environmental impacts of discrete electricity projects have been identified and that acceptable mitigation measures have been implemented through environmental impact assessment.

The EGI indicators address the scope of the environmental and social mandate of the electricity regulator, and the pilot assessments conclude that in all four countries such a mandate is very limited – if it exists at all. For example, the laws identifying regulatory functions in the Philippines, Thailand, and Indonesia make no reference to the regulator's environmental and social responsibilities.[95] The preamble to the Indian Electricity Act 2003 notes that promotion of efficient and environmentally benign policies is one of its objectives and mandates that regulatory commissions should promote cogeneration and renewable energy sources. The act states that regulatory commissions should specify a percentage of renewable energy to be purchased by distribution companies and other major electricity users. Several SERCs have now actually introduced requirements to purchase 2% to 6% of their energy from renewable sources. India's National Electricity Policy also looks to regulators to accelerate rural electrification in meeting the target of achieving 100% household electrification by 2012.[96]

The assessments find that the environmental responsibilities of the electricity regulator are rarely defined, and only limited information about the nature of those responsibilities is available. This compromises the regulator's ability to balance environmental and social considerations against the concerns of other stakeholders. It is therefore difficult to hold regulators accountable for the environmental and social implications of their decisions.

A REGULATORY MANDATE THAT INCLUDES THE ENVIRONMENT AND SOCIAL EQUITY

The electricity governance assessments also address the extent to which efforts are made to include low-income and rural populations in electricity tariff-setting processes. The pilot assessments demonstrate that none of the regulators in the four countries made any specific efforts to communicate either the reasons for tariff revisions or the likely implications of these tariffs for low-income and rural populations.

In accord with the terms of EPIRA, the Philippines Energy Regulatory Commission sets lower tariffs for

consumers with very low levels of consumption by establishing a "lifeline tariff."[97] But the assessment notes that there is little clarity about who is eligible to pay this reduced tariff, and little information is available about the extent and cost to the sector of this program.[98]

Regulatory measures such as integrated resource planning, active promotion of the use of renewable energy and distributed energy, and promotion of energy efficiency can play an important role in reducing environmental impacts of electricity. But the pilot electricity governance assessments conclude that as a result of the limited environmental and social mandate of electricity regulators and the limited efforts to facilitate meaningful public participation in the regulatory process, little attention has been paid to these broader public interest considerations (see Indicators ESA 3 and 5 above). The limited legal mandate and responsibility for addressing environmental and social issues have led to weak capacity within regulatory bodies to address environmental and social aspects of regulation.[99] Regulators in both India and the Philippines were found to lack both the budgetary and human resources to address environmental and social considerations.

Indicator ESA 3: Scope and Transparency of the Regulator's Environmental and Social Mandate	**India** *Medium-Low*	**Thailand** *Low*	**Indonesia** *Low*	**Philippines** *Low*
Reference to environmental and social responsibilities in documents describing role and mandate of regulatory body	✗	✗	✓	✓
Consideration of social and environmental issues in tariff setting	✗	✗	✗	✗
Adequacy of access to relevant information				
Publication of regulator's environmental and social responsibilities in the official government journal	✓	✗	✓	✗
Posted on the regulator's Website	✓	✗	✗	✗
Available at low cost or free to the public	✓	✗	✗	✗
Availability in range of forms	✗	✗	✗	✗
Dissemination through various media/outlets	✗	✗	✗	✗
Efforts to alert marginalized/less privileged populations	✗	✗	✗	✗
Indicator ESA 5: Regulator's Capacity to Evaluate Environmental and Social Issues	*Low*	*N/A*	*N/A*	*Medium*
Specific budgetary resources to support social and environmental issues	✗			✗
Dedicated staff exist	✗			✗
Experience of staff	✗			✗
Availability of training	✗			✓

5

TOWARD BETTER DECISIONS

CONCLUSIONS AND RECOMMENDATIONS

Addressing governance provides an important avenue to new and creative approaches to electricity sector reform. Policymakers, regulators, citizens, and the international community are grappling with the challenges of providing access to reliable and affordable electricity and addressing major environmental challenges. Improved governance can open the door to more creative solutions to these challenges, better systems of implementation, and stronger mechanisms of accountability. The electricity governance assessments identify some strong practices to this end, as summarised in Box 7.

Yet the analysis identifies many weaknesses and areas for improvement. Across the board, the legislative process has not allowed for adequate debate on a vision for the electricity sector or scrutiny of its implementation. In addition, conflicts of interest and political interference undermine the independence of the electricity executive in practice, despite the fact that formal criteria for appointment of senior staff do exist. In a capital-intensive sector where confluence of interest has been characteristic of decision-making, designing adequate safeguards against conflicts of interest is a significant challenge.

The existing dynamic between government authorities and the public falls significantly short of an ideal of the "responsive state." In general, very little information about the basis for new policy initiatives is shared with the public. There is inadequate transparency about critical issues, such as the goals of electricity reform efforts and the role of independent power producers. The lack of transparency about the role of consultants is a serious shortfall, given that private-sector consultants have undertaken critical tasks such as preparing the economic analyses that justify decisions about how to reform the sector, and sometimes even drafting new electricity laws.

Opportunities for public participation in policy processes remain quite limited, and when consultations are conducted, input collected is not always taken seriously by policymakers. In some cases, such as India, efforts have been made to collect public input into policy, which presents a significant step forward. But this input has had little impact on the final decision because effective mechanisms to incorporate input were not in place. Under such circumstances, public participation – which takes no small effort or expense to coordinate – is little better than wasteful tokenism. At the same time, having formal space for transparency, participation, and accountability means very little if stakeholders do not take advantage of this space to represent public interests.

Systems to encourage mainstreaming of environmental and social considerations remain weak. There is, however, an emerging recognition that environmental and social considerations fall within the mandate of electricity-sector institutions. These institutions are beginning to invest in building hu-

BOX 7 | **STRONG PRACTICES IDENTIFIED BY THE EGI ASSESSMENTS**

Cumulative assessments of environmental impacts: The Thai government has begun an initiative to consider Strategic Environmental Assessments taking a holistic approach to sector planning. Credible external forums to provide input into policy-making exist in the form of a National Economic and Social Advisory Council, and a Senate Extraordinary Committee on State Enterprise Reform that conducts public hearings.

A robust legal framework for regulation is emerging in India and the Philippines: Establishing an Interim Regulatory Commission in Thailand has been an important first step to this end. The legal framework for regulation in many Indian states is relatively strong, and regulatory commissions have clear channels of authority, autonomy, and structural independence. There are well defined consultation and tariff setting procedures for the assessed State Electricity Regulatory Commissions and open public hearings. Similarly in the Philippines, regulatory processes are quite strong, particularly in terms of allowing redress mechanisms to appeal decisions. The Electricity Regulatory Commission of the Philippines is a legally mandated, structurally independent quasi-judicial body. There are relatively clear-cut procedures, standards, and rules in place for tariff setting, licensing, generation, distribution, and transmission of electricity.

Effective judicial systems can allow the remedy of review: In all four countries, the court systems were found to be independent and accessible, allowing both civil society groups as well as electricity industry actors the opportunity to appeal fundamental policy and regulatory decisions. In Thailand, the Administrative Court of Thailand undertook an independent review of the process for corporatization of EGAT in response to a claim filed by consumer groups, and concluded that the process was fraught with conflicts of interest and did not protect against abuse of power. In the Philippines, the Supreme Courts have considered and upheld requests to appeal tariff increases on the initiative of consumer groups such as the Freedom from Debt Coalition.

Electricity executives are increasingly sensitive to environmental and social issues: There is an emerging recognition that environmental and social considerations fall within the mandate of electricity-sector institutions. In all four countries, these institutions are beginning to invest in building human resources and budgetary capacity to address environmental and social aspects of electricity. In the Philippines, the DOE requires senior staff to acquire knowledge about environmental sustainability in order to move up within the administrative hierarchy. In Indonesia, energy executive staff can acquire training in environmental issues, particularly in the technical aspects of EIAs.

man resources and budgetary capacity to address environmental and social aspects of electricity. For example, senior level officials in the Philippines Department of Energy complete extensive coursework in environmental and social sustainability through a government supported Master of Public Administration program in order to advance their careers. This potentially opens up new institutional space for advancing sustainability considerations. Nevertheless, environmental considerations are often perceived as a distraction from "serious" economic concerns.

Upstream of project level decisions, planning processes can be an important lever for mainstreaming environmental and social considerations. But existing systems are often weak in practice. Independent planning agencies, such as the Energy Policy and Planning Office in Thailand and the Central Electric-

ity Authority in India, have significant technical capacity in this regard. However, planning institutions and processes lack both credibility and resources, and there is inadequate coordination and coherence across various levels of government and utilities.

Legislators in India and the Philippines have been able to put in place promising provisions for transparency and formal space for public participation in regulation. They have also created important accountability mechanisms to allow the enforcement of regulatory decisions, as well as the opportunity to appeal questionable decisions. Even in a state-owned or -operated electricity sector, establishing an independent regulatory body can improve transparency, participation, and accountability in the sector and thereby enhance credibility and predictability from a citizen perspective.

But effective regulation requires more than just the right rules. It is also vital to operationalize provisions for access to information and public involvement, as evidenced by the India and Philippines assessments. There is little transparency and significant scope for political intervention in the process by which regulators are selected, which presents a critical weakness in the regulatory process that jeopardizes its independence. Regulators need to be proactive to build the trust of consumers and citizens.

From a public interest perspective, it should be in the interests of consumers to have prices that are neither too high nor too low. Certainly, inadequate cost recovery that results from artificially low prices can lead to inadequate investment, maintenance, and efficiency of electricity operations and disrupt reliable supply of service. But by the same token, affordability and equity considerations, particularly in the context of expanding access to electricity for the poor, need to play a central role in regulation. Public interests, such as environmental sustainability and social equity, are seldom included in the mandates of electricity regulators, who consequently lack budgetary and human resources to address these issues.

BOX 8

GENERATING NEW DIALOGUE AMONG STAKEHOLDERS

The process of conducting an assessment of electricity governance has created an important forum to bring disparate stakeholders – who often talk past each other – together for a coherent conversation about how to advance positive change in the electricity sector. Participants have observed that the EGI pilot assessments have helped NGO representatives through their interactions with the advisory panel to build relationships of trust with people within the government and within the utilities.

Many of the NGOs involved in the EGI assessment have very different perspectives on power sector issues, but the assessments have presented an opportunity to pool their experience and expertise. Similarly, by having representatives of both the Energy and Environment Ministries as participants on the national advisory panel, the Thai EGI assessment process sparked a inter-ministerial dialogue about the need for better governance that was previously absent.

EGI has supported efforts to build civil society capacity to occupy formal space for the public to be involved in electricity decision-making. It has also helped to sensitize sector officials and actors to the requirements of good governance. Civil society participants in the India assessment team, for example, have noted that "the fact that the electricity governance toolkit prompts [them] to rigorously document and justify [their] assertions in the assessment report and produce a comprehensive review of electricity governance considerations has helped build [their] credibility."

For their part, civil society organizations in each of the four case study countries have demonstrated significant interest in engaging in electricity governance, as Box 8 elaborates. Yet while civil society has a crucial role to play in electricity governance, its capacity to be systematically involved in decision-making is constrained by limited financial and human resources and insufficient access to technical expertise.

There are limits to using an indicator based framework to understand electricity governance. While applicable across countries, the indicators do not allow a relative ranking of countries in terms of governance performance — rather they present an appraisal of the adequacy of laws and practices at a given moment, and suggest ways to improve performance. The EGI research approach has enabled a detailed diagnosis of key strengths and weaknesses in governance from a public interest perspective that usefully complements ongoing efforts to address technical, operational, and investor aspects of electricity. The EGI assessments identify a number of important measures that can improve governance of electricity. If improving governance can improve access to reliable electricity — particularly for the poorest — and help address some of the inherent tensions of sustainable development, while aiding a transition to cleaner energy, then it is well worth doing.

RECOMMENDATIONS FOR IMPROVING ELECTRICITY GOVERNANCE

The following recommendations represent first order priorities for governments, civil society groups, and the international donor community:

Increase transparency and stimulate broad discussion about the basis for pursuing major policies and initiatives

Transparency, particularly about technically complex and politically sensitive issues, can help ensure that policy decisions are based on accurate assumptions and have not been subject to undue influence from particular stakeholders. Opportunities for public participation and mechanisms to ensure access to information need to be introduced at various levels of the electricity policy process.

Effective legislative oversight: Parliaments and legislative committees need to undertake a more informed and robust debate on the public interest implications of implementing "techno-economic" reforms. A range of citizen, expert, and government input should be considered in developing new policy, and the documents that serve as the basis for this policy need to be publicly available before final decision-making. Making records of these debates available to the public will significantly enhance the transparency and accountability of legislative processes.

Clear processes for public input to policy: By setting timelines for considering new policy, clarifying which actors within the various branches of government and the legislature have the authority to make the final decision, and stating up front how and when public input will be collected, a more predictable process for developing reforms is created. Systems to document the policy development process can be put in place at relatively low costs, can significantly enhance transparency about the inputs and decisions made, and improve accountability. But it is important to circulate information about the process well in advance of decision-making, ideally in a number of easily accessible and understandable formats, so that people beyond sector insiders and industry actors are aware of the structure of the process and their opportunities to be involved.

Comprehensive transparency provisions: More disclosure around issues often considered too "technical" for the general public to understand, such as the basis for power purchase agreements or asset valuation, is essential. Greater public debate and

scrutiny of these "technical issues" can help make the inevitable trade-offs between competing interests transparent and avert costly deadlocks. Public access to detailed analyses of demand-supply scenarios and about the impacts of new energy pricing projects on public interests can allow people to understand the bases for choosing approaches to meeting energy needs. In many cases, civil society organizations and independent researchers may be able to provide new analysis or identify innovative approaches to dealing with challenges, although the utility of releasing such information will depend on the capacity of CSOs to analyze and respond to it. Public consultation in developing policies around independent power production and as part of approving power purchase agreements for new electricity projects can be especially helpful. Transparency about the general terms of power purchase agreements is critical to ensuring that public interests are being protected and can help curb corruption at the project transaction level.

Scrutiny of politically sensitive issues: When governments choose to sell publicly owned assets – which, in turn, allows them to raise cash for government coffers – greater transparency about the basis for determining these prices can help ensure that a nation is getting the best possible deal, and goes some way to help curb corruption around such transactions. At a minimum, the valuation methodology should be disclosed, and the choice of the approach should be justified and explained. Some expert independent review or scrutiny of such valuations from a public interest perspective is important. In particular, there is a need for greater transparency about the role of consultants in developing policy recommendations. It can be helpful to make publicly available the terms of reference for consultants and at least a summary of their final report. An independent expert review of consultant recommendations can help a government decide how best to respond.

Establish robust planning processes that can allow a more comprehensive consideration of options and tradeoffs and help mainstream environmental and social considerations.

The electricity planning process can be enhanced significantly by creating more inclusive processes for developing plans and setting targets, and by instituting robust mechanisms for the public to be involved in monitoring progress.

A clear and adequate mandate for executive agencies: The environmental and social aspects of the energy executive's mandate need to be made clear, and these roles and responsibilities can be publicized and made more transparent. Stronger systems to address environmental and social aspects of electricity are necessary – to be achieved by building in-house capacity and improving systems for coordination with other government branches such as the Ministry of Environment or Health.

Improving the scope and integrity of EIAs: Although in some countries, such as Thailand, efforts are underway to conduct strategic environmental impact assessments for the electricity sector, in general project level EIAs are increasingly reduced to a bureaucratic hurdle to project approval. EIAs, however, are a critical process through which citizen concerns can be considered and a precautionary principle for environmental impacts can be applied to project choices. Particularly in the electricity sector, where the serious environmental and social impacts of electricity generation and transmission projects may be seen as "getting in the way" of economic development, stronger EIA procedures with greater public participation and access to redress mechanisms are needed. Greater oversight and proactive involvement from the national environmental regulator is needed on this count.

Competent and effective planning institutions: Establishing an independent planning agency with well-qualified staff can significantly strengthen the technical rigour of planning processes, but better systems and mechanisms need to be put in place to ensure that their recommendations are taken into account by policy-makers. In many countries, it is not clear which agency has authority in energy planning processes or whether the institutions in question have adequate financial and human resources to conduct a participatory planning process. While decentralising the planning process so that it is better tailored to local conditions and realities is important, it is equally important to ensure coherence across plans at the national, local, and utility level so that all agencies are working towards common goals. Regardless of the level at which plans for the electricity sector are developed, there is a need for greater public input into these processes. Environmental issues – including global climate change – need to be given particular consideration in this context. The recommendations of the planning body need to be easily accessible by the public so people can be informed about sector trajectories. Civil society has an important role to play in monitoring implementation of electricity plans and demanding accountability.

Consider the implications of institutional design and capacity of regulatory bodies for practicing good governance.

While establishing independent regulators for energy and infrastructure services can allow significant improvements in governance of public services, it is vital to operationalize provisions for access to information and public involvement. Engaging consumers in the regulatory process is particularly important in this context.

Ensuring access to information about regulatory decisions: Clear criteria for determining which documents are confidential and which are in the public domain are needed, rather than individual staff exercising discretion in making these judgments. Legal provisions – such as requirements to disclose information to the public—need to be complemented with practical measures and systems to operationalize these provisions. These include using databases that help citizens identify and access documents, ensuring that these documents are available at a reasonable cost, and making people aware that this information is available to them. Advancements in information technology have made such measures increasingly easy and inexpensive to execute – for example, it takes little cost or effort to make the orders of a regulatory commission available through its website. However, simply making information available through the internet is not sufficient to ensure that poorer people will be able to get this information easily as they often will not have access to such technologies.

Support participation of socio-economically weaker groups: It is important to create special institutional mechanisms to include stakeholders and socio-economically weaker groups of society in the regulatory process, for example through appointing a consumer representative, requiring that regulatory staff make submissions on behalf of weaker groups, or including pertinent branches of the government, such as departments tasked with rural development, or labor affairs. Regulators can also be more proactive about engaging citizens and civil society organizations and helping familiarize them with the regulatory process and how they can play a role. Strong provisions for transparency, participation, and accountability in electricity regulation will enhance credibility and predictability in electricity from a citizen perspective.

Credible and competent regulators: Selection of credible and competent regulators is critical to the success of regulation. It is therefore important to have public composition and eligibility criteria for new regulators and well-defined procedures to this end. Greater transparency about the basis for selecting regulators

can help create a degree of accountability for the competence of nominated persons. Clear provisions to prevent conflicts of interest among regulatory commission members and staff are needed, such as requirements that regulators have no financial interests in any organization or utility in the electricity industry, and that they cannot seek commercial employment within the electricity industry for an appropriate period of time after they step down from office. Regulation is a complex and dynamic business, and it is therefore important to provide regulators with regular training in a diverse range of fields – including environmental and social aspects of regulation – and ensure that this training reflects a wide range of perspectives on controversial issues.

Invest in improving the effectiveness of public engagement in electricity governance

Greater public involvement in electricity governance can improve decisions and enhance their credibility, but governments need to signal that they will take public input seriously. By the same token, civil society capacity to engage in electricity governance needs to be supported and enhanced.

Reflect public input in decisions and processes: There must be room for a decision to be influenced or changed based on public input, and while public participation can help build public acceptance of decisions, these efforts must achieve more than simply confirming pre-determined choices and decisions. Public participation processes need to be strengthened in order to improve electricity governance. Feedback mechanisms to incorporate public input as appropriate (or clarify the basis on which input has been disregarded) are critical if public participation is to be useful. Governments can make more concerted efforts to collect a range of public input, including input from stakeholders who may be critical of government positions on issues and particularly from stakeholders who will be most directly affected by the decision and its implications. In such contexts, the use of mass media such as radio, newspapers, television, and the Internet can help build public awareness, particularly among weaker groups. Systems to communicate why some input was disregarded and what was reflected in the final decision can provide a valuable accountability mechanism.

Build civil society capacity to engage in both policy and regulatory processes: The impact of the transparency, participation, and accountability provisions proposed is contingent in part on citizen interest and capacity to actively participate in electricity sector governance. There is a need to mobilize greater awareness of electricity issues — and formal opportunities to influence electricity decision-making — among a wide range of civil society groups and citizens. The technical complexity of the electricity sector adds to the challenge of sustaining vibrant civil society input in such processes. Financial and human resource constraints are also a critical barrier to civil society capacity to fully utilize opportunities to express their voice on electricity governance. Training programs and other efforts to catalyze closer ties between more advocacy-oriented groups and technical experts and academics are also valuable and important measures to build capacity. In particular, it is important to expand the reach of the regulatory process to include the poorer segments of society, through further exploration of the viability of establishing a consumer representative function. Governments and the international community have an important role, and indeed a responsibility, to reach out to civil society and empower them to be useful participants in electricity governance.

REFERENCES

Ackerman, John M. 2005. "Social Accountability in the Public Sector: A Conceptual Discussion," in *Social Development Papers: Participation & Civic Engagement.* Washington D.C.: World Bank.

Beierle, Thomas C. and Jerry Cayford. 2002.*Democracy in Practice: Public Participation in Environmental Decisions.* Washington D.C.: Resources for the Future.

Braithwaite, J. 2005. *Responsive Regulation and Developing Economics*, Global Economic Governance Programme.

Center for Policy Research, Consumer and Civic Action Group, Center for Environment Concerns, Praja. 2006. *India Electricity Governance Assessment.* New Delhi: Center for Policy Research.

Center for Policy Research, Consumer and Civic Action Group, Center for Environment Concerns, Praja. 2006. *India Electricity Governance Indicator Worksheets.* Online at: http://electricitygovernance.wri.org.

Dixit, Shantanu, Subodh Wagle, and Girish Sant. 2001. "The Real Challenge in Power Sector Restructuring: Instilling Public Control through Transparency, Accountability, and Public Participation." *Energy for Sustainable Development* V (3): 95-101.

Dubash, Navroz K, ed. 2002. *Power Politics: Equity and Environment in Electricity Reform.* Washington, D.C.: World Resources Institute.

Dubash, Navroz K. 2005. "Regulation as an Arena for Social Policy Examples from Electricity in Asia." Paper read at International Conference on New Frontiers of Social Policy: Development in a Globalizing World, Arusha, Tanzania. December 12-15. http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTSOCIALDEVELOPMENT/0,,contentMDK:20736421~pagePK:210058~piPK:210062~theSitePK:244363,00.html.

Florini, Ann. 2005. *The Coming Democracy: New Rules for a New World.* Washington, D.C.: Brookings Institution Press.

Goetz, Anne Marie, and John Gaventa. 2001. *Bringing Citizen Voice and Client Focus into Service Delivery.* Sussex, England: Institute of Development Studies.

Green Independent Power Producers, Kuryente Network, Development Academy of the Philippines, Action for Economic Reforms. 2006. *Philippines Electricity Governance Assessment.* Manila: Green Independent Power Producers.

Green Independent Power Producers, Kuryente Network, Development Academy of the Philippines, Action for Economic Reforms. 2006. *Philippines Electricity Governance Indicator Worksheets.* Online at: http://electricitygovernance.wri.org.

Gulati, Mohinder and M. Y. Rao. 2006 "Corruption in the Electricity Sector." World Bank Presentation. Online at: http://www.worldbank.org/publicsector/anticorrupt/GulatiApril6.ppt#256,x,Corruption in Electricity Sector

Health Systems Research Institute, Palang Thai, Thailand Environment Institute, Confederation of Consumer Organisations, King Prajadhipok's Institute. 2006. *Thailand Electricity Governance Assessment.* Bangkok, Thailand: Health Systems Research Institute.

Health Systems Research Institute, Palang Thai, Thailand Environment Institute, Confederation of Consumer Organisations, King Prajadhipok's Institute. 2006. *Thailand Electricity Governance Indicator Worksheets.* Online at: http://electricitygovernance.wri.org.

Hira, Anil, David Huxtable, and Alexandre Leger. 2005. "Deregulation and Participation: An International Survey of Participation in Electricity Regulation." *Governance: An International Journal of Policy, Administration, and Institutions* 18 (1 January): 53-88.

Indonesian Institute for Energy Economics, Working Group on Power Sector Restructuring, Pelangi, Institute for People Centered Business, WWF Indonesia. 2006. *Indonesia Electricity Governance Assessment.* Jakarta: Indonesian Institute for Energy Economics.

Indonesian Institute for Energy Economics, Working Group on Power Sector Restructuring, Pelangi, Institute for People Centered Business, WWF Indonesia. 2006. *Indonesia Electricity Governance Indicator Worksheets.* Online at: http://electricitygovernance.wri.org.

Johanssen, Lars, Demstar & Karin Hilmer Pedersen. 2005. "The Responsive State: Openness and Inclusion in the Policy Process." Paper read at International Conference on New Frontiers of Social Policy: Development in a Globalizing World, Arusha, Tanzania, December 12-15. http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTSOCIALDEVELOPMENT/0,,contentMDK:2073642x~pagePK:2x0058~piPK:2x0062~theSitePK:244363,00.html.

Latinobarometro Poll 2005. http://www.latinobarometro.org/uploads/media/2005_02.pdf .

Levi, M. 2005. "Achieving Government Legitimacy and Good Government." Paper read at International Conference on New Frontiers of Social Policy: Development in a Globalizing World, Arusha, Tanzania, December 12-15.

Levy, Brian, and Pablo T. Spiller. 1994. "The Institutional Foundations of Regulatory Commitment: A Comparative Analysis of Telecommunication Regulation." *Journal of Law, Economics, & Organization* x0 (2): 201-246.

Martin, Brendan. 2005. "Social Dialogue as an Instrument of Social Policy." Paper read at International Conference on New Frontiers of Social Policy: Development in a Globalizing World, Arusha, Tanzania, December 12-15. athttp://web.worldbank.org/WBSITE/EITERNAL/TOPICS/EXTSOCIALDEVELOPMENT/0,,contentMDK:20736421~pagePK:210058~piPK:210062~theSitePK:244363,00.html.

Morgan, B. 2006. "Turning Off the Tap: Urban Water Service Delivery and the Social Construction of Global Administrative Law." *The European Journal of International Law* 17(1): 1-32.

Palast, Greg, Jerrold Oppenheim and Theo MacGregor. 2003. *Democracy and Regulation: How the Public Can Govern Essential Services.* Boston: Pluto Press.

Patterson, Walt.1999. *Transforming Electricity.* London: Royal Institute of International Affairs.

Petkova, Elena, Crescencia Maurer, Norbert Henninger and Fran Irwin. 2002. *Closing the Gap: Information, Participation, and Justice in Decision-Making for the Environment.* Washington, D.C.: World Resources Institute.

Prayas. 2003. *A Good Beginning But Challenges Galore.* Pune: Prayas.

Prayas. *Lessons of the Enron Disaster: Democratization through TAPing of Governance as the Remedy.* Pune: Prayas. Online at: http://prayaspune.org/energy/24_INFRA_Rep_01.pdf.

Prayas. 2001. *Privatization or Democratization - The Key to the Crises in the Electricity Sector - The Case of Maharashtra.* Pune, Prayas. http://prayaspune.org/energy/33_electricity_sector_in_maharashtra.pdf.

Prayas. *The Real Challenge in Power Sector Restructuring: Instilling Public Control through TAP.* Pune: Prayas. Online at: http://prayaspune.org/energy/2x_ESD_TAP_Challenge%20.pdf.

Rhodes, R. A. W. 1996. "The New Governance: Governing without Government." *Political Studies* 44: 652-667.

Rose-Ackerman, Susan. 1999. *Corruption and Government – Causes, Consequences, and Reform.* New York: Cambridge University Press.

Sclar, E. 2005. "Public Responsibility for Public Services: Moving Beyond the Limits of the Privatization Debate." Paper read at International Conference on New Frontiers of Social Policy: Development in a Globalizing World, Arusha, Tanzania, December 12-15.http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTSOCIALDEVELOPMENT/0,,contentMDK:20736421~pagePK:210058~piPK:210062~theSitePK:244363,00.html.

Stern, Jon, and Stuart Holder. 1999. "Regulatory Governance: Criteria for Assessing the Performance of Regulatory Systems: An Application to Infrastructure Industries in the Developing Countries of Asia*." Utilities Policy* 8: 33-50.

Williamson, John, ed. 1994. *The Political Economy of Policy Reform.* Washington D.C.: Institute for International Economics.

Wood, Davida. 2005. "Taking Power: Social and Political Dynamics of the Energy Sector." Paper read at International Conference on New Frontiers of Social Policy: Development in a Globalizing World. Arusha, Tanzania. December 12-15. Online at: http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTSOCIALDEVELOPMENT/0,,contentMDK:20736421~pagePK:210058~piPK:210062~theSitePK:244363,00.html.

World Bank. 2006. *Towards an Investment Framework for Clean Energy.* Washington D.C., World Bank.

World Bank. 2003. *World Development Report 2004 – Making Services Work for Poor People.* Washington D.C.: World Bank.

World Resources Institute. 2005. *Navigating the Numbers, Greenhouse Gas Data and International Climate Policy.* Washington D.C.: World Resources Institute.

NOTES

1. The electricity governance indicator toolkit consists of 63 research questions that address policy, regulation, and environmental and social considerations in the electricity sector. The toolkit and the pilot assessments of governance in India, Indonesia, Thailand, and the Philippines are available online at http://electricitygovernance.wri.org.
2. John Williamson, *The Political Economy of Policy Reform*. (Washington D.C.: Institute for International Economics, 1994).
3. World Bank, *An Investment Framework for Clean Energy and Development: A Progress Report* (Washington D.C.: World Bank, September 2006), v.
4. World Resources Institute, *Navigating the Numbers, Greenhouse Gas Data and International Climate Policy* (Washington D.C.: World Resources Institute, 2005), p 57.
5. World Bank, *Towards an Investment Framework for Clean Energy* (Washington, D.C.: World Bank, April 2006).
6. Ada Karina Izaguirre, "Private Participation in the Electricity Sector – Recent Trends" (Washington DC: World Bank, 1998), note 154.
7. Mohinder Gulati and M. Y. Rao, "Corruption in the Electricity Sector," Presentation to the World Bank, April 6, 2006. Online at: http://www1.worldbank.org/publicsector/anticorrupt/GulatiApril6.ppt#256,1,Corruption in Electricity Sector. This is based on a simple assumption that 10% of capital investment, and potential revenue from operations lost in bribes. The assumption is based on anecdotal evidence rather than rigorous analysis of data.
8. Corporación Latinobarómetro, *Latinobarómetro Report* 2005. Online at: http://www.latinobarometro.org/uploads/media/2005_02.pdf.
9. The roll call of problem projects include high cost and delayed power plants such as Dabhol (India) and Paiton (Indonesia), botched water privatization such as Cochabamba (Bolivia), and electricity distribution companies such as AES in Orissa (India).
10. Prayas, *Privatization or Democratization The Key to the Crises in the Electricity Sector - The Case of Maharashtra*. Online at: http://prayaspune.org/energy/33_electricity_sector_in_maharashtra.pdf; Prayas, *Lessons of the Enron Disaster: Democratization through TAPing of Governance as the Remedy*. Online at: http://prayaspune.org/energy/24_INFRA_Rep_01.pdf; and Prayas, The Real Challenge in Power Sector Restructuring: Instilling Public Control through TAP, available at: http://prayaspune.org/energy/21_ESD_TAP_Challenge%20.pdf.
11. See, e. g., *International Journal of Social Science* No. 50(155) (March 1998) on governance.
12. Ann Florini, *The Coming Democracy: New Rules for a New World* (Washington, D.C.: Brookings Institution Press, 2005), p 8.
13. R.A.W. Rhodes, 1996, "The New Governance: Governing without Government." *Political Studies* 44: 652-67.
14. E Sclar, "Public Responsibility for Public Services: Moving Beyond the Limits of the Privatization." Paper delivered at the International Conference on New Frontiers of Social Policy: Development in a Globalizing World, Arusha, Tanzania, December 12-15, 2005.
15. Brendan Martin, "Social Dialogue as an Instrument of Social Policy," paper delivered at the International Conference on New Frontiers of Social Policy: Development in a Globalizing World, Arusha, Tanzania, December 12-15, 2005.
16. Davida Wood, "Taking Power: Social and Political Dynamics of the Energy Sector." Paper delivered at the International Conference on New Frontiers of Social Policy: Development in a Globalizing World, Arusha, Tanzania, December 12-15, 2005.
17. Anne Marie Goetz and John Gaventa, *Bringing Citizen Voice and Client Focus into Service Delivery* (Sussex, England: Institute of Development Studies, 2001)
18. Navroz K. Dubash. Power Politics: Equity and Environment in Electricity Reform. (Washington DC: World Resources Institute, 2002).
19. Davida Wood, "Taking Power: Social and Political Dynamics of the Energy Sector." Paper delivered at the International Conference on New Frontiers of Social Policy: Development in a Globalizing World, Arusha, Tanzania, December 12-15, 2005.
20. Indeed, new and smaller companies that might seek to participate in electricity are put at a significant disadvantage by these inadequacies in governance.
21. Renée A. Irvin and John Stansbury, "Citizen Participation in Decision Making: Is it Worth the Effort?" *Public Administration Review*. (February 2004), p 15.

22. Thomas C. Beierle and Jerry Cayford, *Democracy in practice: Public Participation in Environmental Decisions* (Washington DC: Resources for the Future, 2002). Improved substantive quality was based on eight separate measures of quality criteria including cost-effectiveness, joint gains, added information to the analysis, technical analysis, innovative ideas, and the introduction of a holistic and integrated approach to a problem.
23. Florini, *passim*.
24. Goetz and Gaventa, *passim*.
25. Beirle and Cayford, p 3.
26. B. Morgan, 2006. "Turning Off the Tap: Urban Water Service Delivery and the Social Construction of Global Administrative Law" in *The European Journal of International Law* 17(1): 1-32.
27. M. Levi. "Achieving Government Legitimacy and Good Government ." Paper presented at the international Conference on New Frontiers of Social Policy: Development in a Globalizing World, Arusha, Tanzania, ecember 12-15, 2005.
28. John M. Ackerman. "Social Accountability in the Public Sector: A Conceptual Discussion ." in *Social Development Papers: Participation & Civic Engagement*. (Washington D.C.: World Bank, 2005).
29. Lars Johanssen, Demstar & Karin Hilmer Pedersen, "The Responsive State: Openness and Inclusion in the Policy Process." Paper read at the International Conference on "New Frontiers of Social Policy: Development in a Globalizing World, Arusha, Tanzania, December 12-15, 2005.
30. Brian Levy and Pablo T. Spiller. 1994. "The Institutional Foundations of Regulatory Commitment: A Comparative Analysis of Telecommunication Regulation." *Journal of Law, Economics, & Organization*10 (2): p 201-46.
31. See, e. g., Jon Stern and Stuart Holder. 1999. "Regulatory Governance: Criteria for Assessing the Performance of Regulatory Systems" in "An Application to Infrastructure Industries in the Developing Countries of Asia." *Utilities Policy*, 8: 33-50.
32. Navroz K. Dubash "Regulation as an Arena for Social Policy Examples from Electricity in Asia ." Paper read at International Conference on *New Frontiers of Social Policy: Development in a Globalizing World*, (Arusha, Tanzania: December 12-15, 2005).
33. Prayas Energy Group, *A Good Beginning But Challenges Galore - A Survey Based Study of Resources, Transparency,and Public Participation in Electricity Regulatory Commissions in India* (Pune: Prayas, 2003).
34. Anil Hira, David Huxtable, and Alexandre Leger. "Deregulation and Participation: An International Survey of Participation in Electricity Regulation ." *Governance: An International Journal of Policy, Administration, and Institutions* (January 2005), p 53-88.
35. John Braithwaite. *Responsive Regulation and Developing Economics* (Global Economic Governance Programme, 2005)
36. Elena Petkova, Crescencia Maurer, Norbert Henninger and Fran Irwin. *Closing the Gap: Information, Participation, and Justice in Decision-Making for the Environment* (Washington, D.C.: World Resources Institute, 2002).
37. See appendix II for a summary of all of the indicators from the four pilot assessments.
38. The electricity sector is now framed by the original law no. 15/1987.
39. Health Systems Research Institute, Palang Thai, Thailand Environment Institute, Confederation of Consumer Organisations, King Prajadhipok's Institute. *Thailand Electricity Governance Assessment*. (Bangkok, Thailand: Health Systems Research Institute, 2006), p 5.
40. Green Independent Power Producers, Kuryente Network, Development Academy of the Philippines, Action for Economic Reforms, *Philippines Electricity Governance Indicator Worksheets* (2006) PP 7, p 12. Online at: http://electricitygovernance.wri.org,
41. Indonesian Institute for Energy Economics, Working Group on Power Sector Restructuring, Pelangi, Institute for People Centered Business, WWF Indonesia, *Indonesia Electricity Governance Indicator Worksheets* (2006) PP 7, p 15-16. Online at: http://electricitygovernance.wri.org
42. Center for Policy Research, Consumer and Civic Action Group, Center for Environment Concerns, Praja, *India Electricity Governance Indicator Worksheets* (2006) PP 7, pp 20 -21. Online at: http://electricitygovernance.wri.org.
43. Center for Policy Research, *India Indicator Worksheets,* PP 21.

44. Green Independent Power Producers, *Philippines Indicator Worksheets,* PP 21.
45. In the Philippines, the legislature was not involved in the IPP policy development. The Legislature enacted the Build-Operate-Transfer (BOT) Law, which paved the way for the entry of the IPPs
46. Green Independent Power Producers, *Philippines Indicator Worksheets,* PP 9, pp 17-18.
47. Indonesian Institute for Energy Economics, *Indonesia Indicator Worksheets,* PP 9, p 19.
48. Ibid., PP 14, p 23.
49. Health Systems Research Institute, Palang Thai, Thailand Environment Institute, Confederation of Consumer Organisations, King Prajadhipok's Institute, *Thailand Electricity Governance Indicator Worksheets* (2006) PP 14, p 29. Online at: http://electricitygovernance.wri.org ,
50. Ibid., PP 14, p 30.
51. Center for Policy Research, *India Indicator Worksheets,* PP 9, p 27. The government did also consult selected NGOs including Prayas Energy Group and the Energy Research Institute.
52. Ibid., PP 9, pp 25 -26.
53. Ibid., p 25.
54. This committee is known as the Badan Pertimbangan Jabatan dan Kepangkatan (Baperjakat).
55. Center for Policy Research, *India Indicator Worksheets,* PP 3, p 10.
56. Health Systems Research Institute, *Thailand Indicator Worksheets,* PP 3, p 11.
57. Green Independent Power Producers, *Philippines Indicator Worksheets,* PP 10, p 19.
58. Ibid., PP 10, p 19.
59. Health Systems Research Institute, *Thailand Indicator Worksheets,* PP 10, p 25.
60. Center for Policy Research, *India Indicator Worksheets,* ESA 9, p 20.
61. Equivalent to one-fourth of one centavo per kilowatt-hour (P0.0025/kWh).
62. The rehabilitation fund is managed by the National Power Corporation.
63. Green Independent Power Producers, *Philippines Indicator Worksheets,* ESA 3, p 3.
64. The Directorate of Electrical Engineering *(Direktorat Teknik Ketenagalistrikan*) within the DGEEU is responsible for environmental sustainability, electricity sector safety, monitoring installations, and ensuring the competence of technical/engineering staff. Correspondingly, the Directorate of Electricity Business Management (*Direktorat Pembinaan Pengusahaan Tenaga Listrik*) within the DGEEU addresses social issues including tariff setting, settlement of commercial differences among the provinces and electrical power suppliers, and service to electricity consumers and consumer protection.
65. Center for Policy Research, et al, *India Electricity Governance Assessment* (New Delhi: Center for Policy Research, 2006) p 19.
66. Center for Policy Research, *India Indicator Worksheets,* ESA 3, p 4.
67. It has set up a Central Energy Conservation Fund under the Bureau of Energy Efficiency, which is staffed by personnel with the explicit responsibility to address energy conservation issues. The ministry also has a dedicated rural electrification program under "Rajeev Gandhi Grameen Vidyutikaran Yojana" and the Central Institute of Rural Electrification (CIRE), staffed through the Rural Electrification Corporation, a financial institution that supports state power utilities and rural power cooperatives to implement rural electrification projects. The institute houses a well maintained library to support training for power sector officials on rural electrification.
68. Indonesian Institute for Energy Economics, *Indonesia Indicator Worksheets,* ESA 4.
69. Ibid., ESA 1 and 4.
70. Philippines ESA 8. Yet in other planning initiatives – such as the Biosafety Framework of the Philippines—more robust approaches to public consultation and input have been successfully coordinated.
71. Indonesia Electricity Law No. 15/1985, Section 5, Article (2).
72. Indonesian Institute for Energy Economics, Working Group on Power Sector Restructuring, Pelangi, Institute for People Centered Business, WWF Indone-

sia. *Indonesia Electricity Governance Assessment* (Jakarta: Indonesian Institute for Energy Economics, 2006), 33.

73. EPPO is also being tasked with a growing number of regulatory functions, which may compromise its independence and role as a planning body.
74. Health Systems Research Institute, *Thailand Indicator Worksheets,* PP 6, p 15.
75. Indonesian Institute for Energy Economics, *Indonesia Indicator Worksheets,* PP 6, p 10.
76. Ibid., PP 6, p 12.
77. Ibid., ESA 8.
78. Center for Policy Research, *India Electricity Governance Assessment*, RP 10; Green Independent Power Producers, Kuryente Network, Development Academy of the Philippines, Action for Economic Reforms. *Philippines Electricity Governance Assessment* (Manila: Green Independent Power Producers, 2006), RP 10.
79. Ibid., RP 18; Ibid., RP 18.
80. Ibid., RP 7; Ibid., RP 7.
81. Since the regulator was not yet operational, there were no grounds to assess procedural certainty under this new system. In the absence of an independent regulator in Indonesia, it is difficult to assess procedural certainty, and the existence of an appeals mechanism was not addressed.
82. Center for Policy Research, *India Electricity Governance Assessment* RP 2 and 3; Green Independent Power Producers, *Philippines Electricity Governance Assessment*, RP 2 and 3.
83. Center for Policy Research, *India Electricity Governance Assessment*, RP 4, Tamil Nadu.
84. Indian Electricity Act 2003.
85. Defined as relatives within the fourth civil degree of consanguinity or affinity.
86. Center for Policy Research, *India Electricity Governance Assessment* RP 14-17; Green Independent Power Producers, *Philippines Electricity Governance Assessment*, RP 14-17; Health Systems Research Institute, *Thailand Electricity Governance Assessment*, RP 14-17; Indonesian Institute for Energy Economics, *Indonesia Electricity Governance Assessment,* RP 14-17.
87. Subject to seating capacity at the venue.
88. The right to participate in other proceedings at the discretion of the regulatory commission.
89. Indian Electricity Act 2003, S. 94.3.
90. Center for Policy Research, *India Electricity Governance Assessment* RP 8; Green Independent Power Producers, *Philippines Electricity Governance Assessment*, RP 8.
91. This indicator was only applied in the Philippines and India as the "interim regulator" was established recently in Thailand, and Indonesia does not have independent regulator.
92. Center for Policy Research, *India Electricity Governance Assessment,* RP 12, 13; Green Independent Power Producers, *Philippines Electricity Governance Assessment*, RP 12 and 13; Health Systems Research Institute, *Thailand Electricity Governance Assessment*, RP 12,13; Indonesian Institute for Energy Economics, *Indonesia Electricity Governance Assessment*, RP 12 and 13.
93. Indian Electricity Act 2003, 79.3
94. Center for Policy Research, *India Electricity Governance Assessment*, RP 8; Green Independent Power Producers, *Philippines Electricity Governance Assessment*, ESA 3.
95. Center for Policy Research, *India Electricity Governance Assessment,* EGA 3; Electricity Act 2003.
96. This is known as a "lifeline consumption" tariff. These prices are subsidized by larger consumers. The Indian state of Tamil Nadu also provides similar "lifeline" tariff structure for low income and rural populations.
97. Green Independent Power Producers, *Philippines Electricity Governance Assessment*, ESA 20.
98. Center for Policy Research, *India Electricity Governance Assessment*, ESA 5; Green Independent Power Producers, *Philippines Electricity Governance Assessment*, ESA 5; Health Systems Research Institute, *Thailand Electricity Governance Assessment*, ESA 5; Indonesian Institute for Energy Economics, *Indonesia Electricity Governance Assessment,* ESA 5.

ABOUT THE AUTHORS

SMITA NAKHOODA is an Associate in the Institutions and Governance Program and leads work on the Electricity Governance Initiative at WRI. She also works with the International Financial Flows and the Environment Project, which seeks to influence patterns of development finance to be more environmentally sustainable. Before joining WRI, she worked with the United Nations Development Program in Uganda on environmental issues, and completed research exploring the impact of renewable energy technologies for electrification in Kenya and Uganda on sustainable development. Ms. Nakhooda is a graduate of Dartmouth College, with degrees in Government and Environmental Studies.

SHANTANU DIXIT is a Core Team Member of the Prayas Energy Group, and has been engaged in analysis and advocacy related to the electricity sector since 1992. He has worked on a range of power sector related issues ranging from technical and economic questions, to legal and public interest considerations. His past work includes analysis of power purchase agreements; energy efficiency and demand side management; renewable energy; integrated resource planning for the state of Maharashtra; agricultural power consumption and subsidies; a study comparing the performance of private distribution utilities in India; and a survey based study of resources, transparency and public participation in state electricity regulatory commissions in India. He leads regulatory interventions in Maharashtra state on behalf of Prayas Energy Group. He is currently focused on issues related to electricity sector restructuring and regulation. Mr. Dixit received his Bachelor's degree in Electrical Engineering and his Master's degree in Business Administration (M.B.A) from the University of Pune.

NAVROZ K. DUBASH is Associate Professor at the Centre for the Study of Law and Governance, Jawaharlal Nehru University, Delhi. He was formerly IDFC Chair Professor of Governance and Public Policy at the National Institute of Public Finance and Policy (New Delhi), and Senior Associate at the World Resources Institute, Washington DC. His work focuses on the political economy of institutional change and governance reform, with an emphasis on natural resource and service delivery sectors. The Electricity Governance Initiative builds on his earlier work on the political economy of electricity liberalization and reform, with particular attention to the exclusion of social and environmental concerns. Dr. Dubash holds a Ph.D. and M.A. in Energy and Resources from the University of California, Berkeley, and a B.A. in Public and International Affairs from Princeton University.

APPENDIX I

COMPLETE INDICATOR SUMMARIES FROM THE THAILAND, INDIA, INDONESIA, AND PHILIPPINE ASSESSMENTS OF ELECTRICITY GOVERNANCE

Policy Process (PP)

		KEY ATTRIBUTES	INDIA	THAILAND	INDONESIA	PHILIPPINES
INDICATOR	PP 1	*Capacity of Legislative Committee*	*Medium*	*N/A*	*Medium-High*	*Medium*
		Existence of committee	✓		✓	✓
		Trained staff and access to documentary resources	✗		✓	✗
		Opportunities for training	✗		✗	✗
		Financial resources	✓		✓	✓
		Authority to call for evidence	✓		✓	✓
	PP 2	*Procedures of Legislative Committee*	*Medium*	*Medium-Low*	*Medium*	*Medium-Low*
		Disclosure of interests of the members	✗	✗	✓	✗
		Reasoned reports	✓	✗	✓	✓
		Active, with regular meetings	✓	✗	✓	✓
		Public consultations and open proceedings	✗	✗	✗	✓
		Public availability of submissions	✗	✗	✗	✗
		Public availability of own documents	✗	✓	✗	✗
		Rreport of action taken	✓	✓	✗	✗
	PP 3	*Independence of Electricity Ministry / Department*	*Medium-High*	*Medium-Low*	*Low*	*Medium*
		Criteria for appointment	✓	✓	✗	✓
		Fixed tenure and removal procedure	✓	✗	✗	✓
		Disclosure of interests	✗	✗	✗	✓
		Rules about conflict of interests	✓	✗	✗	✓
	PP 4	*Annual Reports of the Electricity Ministry / Department*	*Medium*	*N/A*	*N/A*	*Medium-High*
		Financial reporting	✗			✓
		Review of progress	✓			✓
		Public availability	✓			✓
		Dissemination in local language	✗			✗
	PP 5	*Advisory Committees to the Electricity Ministry / Department*	*Medium*	*N/A*	*N/A*	*Low*
		Clear role and sufficiently broad mandate	✓			✗
		Wide and balanced representation	✗			✗
		Access to financial and analytical resources	✓			✗
		Periodic meeting with public notification	✓			✗
		Public disclosure of minutes	✗			✗
		Responses of the executive to advisory committee deliberations are disclosed along with minutes	✗			✗
	PP 6	*Distinct Planning / Policy Agency*	*Medium-High*	*Medium-Low*	*Low*	*Low*
		Existence of planning/policy agency	✓	✓	✗	✗
		Mechanism for consultation by executive	✓	✗	✗	✗
		Authority to seek information	✓	✗	✗	✗
		Availability of resources	✓	✗	✗	✗
		Requirements for transparency	✗	✗	✗	✗
		Requirements for consultation (from stakeholders)	✗	✗	✗	✗

Policy Process (PP)

INDICATOR	KEY ATTRIBUTES	INDIA	THAILAND	INDONESIA	PHILIPPINES
PP 7	***Debate on Reform / Restructuring Law or Other Key Policy Change Law***	***Medium-High***	***Low***	***Medium-High***	***Medium***
	The reform/restructuring law was enacted through the legislature	✓	✗	✓	✓
	Criteria of effective legislative process				
	Adequate time for debate	✓	✗	✓	✗
	Attendance of members	✓	✗	✓	✗
	Duration of debate	✗	✗	✓	✓
	Availability of debate transcripts	✓	✗	✗	✓
PP 8	***Role of Donor Agencies during Policy Reform***	***Medium-Low***	***N/A***	***High***	***Medium-Low***
	Conditions of transparent donor engagement				
	Information about (donor's) policy positions	✗		✓	✓
	Availability of loan documents and conditions	✓		✓	✓
	Information about financial disbursement	✗		✓	✗
	Information about technical assistance	✗		✓	✗
PP 9	***Clarity about Decision-Making Process on Reforms or Policy Change***	***Medium-Low***	***Medium-Low***	***Medium-Low***	***Low***
	Clarity about the process:				
	Clarity about the decision-maker	✓	✓	✓	✗
	Time frame laid out in advance	✓	✓	✗	✓
	Clear format for decisions	✓	✓	✓	✗
	Time frame for public input	✗	✗	✗	✗
	Specification for the use of public input	✗	✗	✗	✗
	Anticipation of feedback	✗	✗	✗	✗
	Specification of a mechanism for recourse	✗	✗	✗	✗
	Provision for documentation of the process	✗	✗	✓	✓
	Ease of access and breadth of information				
	Information circulated with reasonable lead time	✓	✗	✗	✗
	Information available on Internet and more than one other tool	✓	✗	✗	✗
	Systematic efforts to reach out to disadvantaged communities	✗	✗	✗	✗
PP 10	***Scope of Background Policy Information Available to the Public about Government Analysis and Stakeholder Views***	***Low***	***Low***	***Low***	***Low***
	Range of citizen, expert, and government input considered	✗	✗	✗	✗
	Documents available in at least two accessible public locations	✗	✗	✗	✗
	Information available before decision	✗	✗	✗	✗
PP 11	***Scope of Background / Supporting Information Available to Public Regarding Use of Consultants***	***Low***	***N/A***	***N/A***	***Low***
	Availability of terms of reference	✗			✗
	Availability of budget	✗			✗
	Availability of selection procedure	✗			✗
	Availability of report	✗			✓
	Ease of availability	✗			✗
	Timeliness of availability	✗			✗

Policy Process (PP)

		KEY ATTRIBUTES	INDIA	THAILAND	INDONESIA	PHILIPPINES
INDICATOR	PP 12	*Independent Review of Recommendations by Consultants*	*Low*	*N/A*	*N/A*	*Low*
		Provision for independent review	✗			✗
		Clear process for review	✗			✗
		Clear outreach strategy	✗			✗
		Clear revision process	✗			✗
	PP 13	*Capacity of Organizations in Civil Society*	*Medium*	*Medium-High*	*High*	*Medium-High*
		Presence of organizations	✓	✓	✓	✓
		Techno-economic analytical capacity	✓	✓	✓	✓
		Proactive engagement and strategic capacity	✓	✓	✓	✓
		Grassroots links	✗	✓	✓	✓
		Capacity for ongoing learning	✓	✓	✓	✓
		Networking	✓	✓	✓	✗
		Broad credibility	✓	✓	✓	✓
	PP 14	*Quality of Public Participation Process during Reform or Policy Decisions*	*Low*	*Lowest*	*Low*	*Medium-Low*
		Public notification	✗	✗	✗	✓
		Public registries of documents	✗	✗	✗	✗
		Communication of decisions within one month	✗	✗	✗	✗
		Use of diverse communication tools	✗	✗	✗	✗
		Adequate time for public consideration	✗	✗	✓	✓
		Opportunity for consultation	✗	✗	✓	✓
		Clear communication on the results of public participation	✗	✗	✗	✗
		Outreach to vulnerable communities	✗	✗	✗	✗
	PP 15	*Quality of Participation by Stakeholders and Government Responsiveness*	*Low*	*Low*	*N/A*	*Low*
		Quality of participation:				
		Quantity of input	✗	✗		✓
		Breadth of input	✗	✗		✓
		Responsiveness of policy maker:				
		Notification of public participation by government	✗	✗		✗
		Summary of public participation	✗	✗		✗
		Response to public participation	✗	✗		✗
	PP 16	*Quality of Media Coverage about Reform or Policy Decisions*	*Low*	*Medium-Low*	*Medium-High*	*Medium*
		Volume of coverage	✗	✗	✓	✗
		Local language coverage	✗	✓	✗	✗
		Balance of coverage	✗	✗	✓	✓
		Quality of coverage	✗	✗	✓	✓
	PP 17	*Methodology for Asset Valuation / Balance Sheet Restructuring during Reforms*	*Medium-Low*	*Low*	*N/A*	*Low*
		Disclosure of methodology	✓	✗		✗
		Justification	✓	✗		✗
		Independent scrutiny	✗	✗		✗
		Public disclosure of independent scrutiny	✗	✗		✗

Policy Process (PP)

INDICATOR	KEY ATTRIBUTES	INDIA	THAILAND	INDONESIA	PHILIPPINES
PP 18	***Process of Privatization and Bidding***	*Low*	*N/A*	*N/A*	*Medium-Low*
	Release of request for proposals	✓			✓
	Release of information provided to the bidders	✗			✗
	Release of decision criteria and decision-making process	✗			✗
	Justification for final selection	✗			✗
PP 19	***Transparency in Allocation of Subsidies***	*High*	*N/A*	*N/A*	*Low*
	Criteria for allocation public	✓			✗
	Process for allocation public	✓			✗
	Reporting on disbursement	✓			✗
PP 20	***Accountability Regarding Subsidies***	*High*	*N/A*	*N/A*	*Low*
	Monitoring system	✓			✗
	Accountability for monitoring	✓			✗
	Procedure for review	✓			✗
PP 21	***Independent Power Producers***	*Medium-Low*	*Medium-Low*	*Low*	*Low*
	Legislative involvement	✓	✗	✗	✗
	Competitive bidding	✗	✓	✗	✗
	Transparent and detailed analysis of demand-supply scenario	✗	✗	✗	✗
	Detailed analysis of tariff impacts	✗	✗	✗	✗
	Public consultation while approving PPAs	✗	✗	✗	✗
	Public consultation during IPP policy development	✗	✗	✗	✗
PP 22	***Competition Policy***	*N/A*	*Low*	*N/A*	*Medium*
	Mechanisms for prevention of market power		✗		✓
	Scrutiny of conditions for competition		✗		✗
	Adequate public consultation		✗		✗
	Transparent competitive mechanisms		✗		✓

Environmental and Social Aspects (ESA)

INDICATOR	KEY ATTRIBUTES	INDIA	THAILAND	INDONESIA	PHILIPPINES
ESA 1	***Clarity of Authority and Jurisdiction to Grant Environmental Clearances / Approvals for Power Sector Projects***	***Medium-High***	***High***	***Medium-High***	***High***
	Provisions in law / implementing regulations	✓	✓	✓	✓
	Definition of how authority is shared across jurisdictions	✓	✓	✗	✓
	Adequate access to relevant information	✓	✓	✗	✓
	Provisions published in official journal/gazette	✓	✓	✓	✓
	Provisions posted on the website	✓	✓	✓	✓
	Public sector agency with principal authority issues brochure, poster, information sheets, etc.	✗	✓	✗	✓
	Provisions may be obtained from public information office/ library	✗	✓	✓	✓
	Public sector agency discloses projects granted approvals in timely fashion	✗	✗	✗	✓
	Principal authority discloses all projects requesting / pending approval	✓	✗	✗	✓
ESA 2	***Clarity and Transparency of Executive's Environmental and Social Mandate***	***Medium***	***Low***	***Medium-Low***	***Medium-High***
	Reference to environmental and social performance of sector in description of executive responsibilities	✓	✓	✓	✓
	Guidance on how executive will cooperate or consult with regulators or other authorities	✓	✗	✗	✓
	Commitments to information disclosure				
	Reporting on ESA of performance of electricity sector	✗	✗	✗	✗
	Availability of documents on executive's environmental and social responsibilities	✗	✗	✓	✗
	Availability of these documents in a range of forms	✗	✗	✗	✓
	Dissemination using various media/outlets	✗	✗	✗	✗
	Efforts to alert marginalized socioeconomic or cultural groups	✗	✗	✗	✗
ESA 3	***Scope and Transparency of Regulator's Environmental and Social Mandates***	***Medium-Low***	***Low***	***Low***	***Low***
	Reference to environmental and social responsibilities in documents describing regulatory body's role and mandate	✗	✗	✓	✓
	Consideration of social and environmental issues in tariff setting	✗	✗	✗	✗
	Adequacy of access to relevant information				
	Regulator's environmental and social responsibilities published in official government journal	✓	✗	✓	✗
	Posted on the regulator's Web site	✓	✗	✗	✗
	Available at low cost or free to the public	✓	✗	✗	✗
	Availability in range of forms/formats	✗	✗	✗	✗
	Dissemination through various media/outlets	✗	✗	✗	✗
	Efforts to alert marginalized/less privileged populations	✗	✗	✗	✗

Environmental and Social Aspects (ESA)

		KEY ATTRIBUTES	INDIA	THAILAND	INDONESIA	PHILIPPINES
INDICATOR	ESA 4	***Executive's Capacity to Evaluate Environmental and Social Issues***	***High***	***N/A***	***High***	***High***
		Specific budgetary resources to support social and environmental issues	✓		✓	✓
		Dedicated staff exist	✓		✓	✗
		Expertise of staff	✓		✓	✓
		Availability of training	✓		✓	✓
	ESA 5	***Regulator's Capacity to Evaluate Environmental and Social Issues***	***Low***	***N/A***	***N/A***	***Medium***
		Specific budgetary resources to support social and environmental issues	✗			✗
		Existence of dedicated staff	✗			✗
		Expertise of staff	✗			✗
		Availability of training	✗			✓
	ESA 6	***Legislative Committee Capacity to Assess Environmental and Social Issues***	***Low***	***High***	***Medium***	***Low***
		Specific budgetary resources to support social and environmental issues	✗	✗	✗	✗
		Existence of dedicated staff	✗	✓	✗	✗
		Expertise of staff	✗	✓	✓	✗
		Availability of training	✗	✗	✗	✗
	ESA 7	***Public Participation in Setting Minimum Environmental Performance Standards in Electricity Sector Laws and Policies***	***Medium***	***N/A***	***Low***	***Medium***
		Minimum environmental performance standards for the electricity sector exist	✓		✗	✓
		Elements of quality for participation				
		Evidence of public consultation in determining standards	✗		✗	✓
		Evidence of communication of public input	✗		✗	✗
		Existence of explanation for existing standards	✗		✗	✗
		Regular reporting on industry compliance with standards	✓		✗	✗
	ESA 8	***Inclusion of Environmental Considerations in National Power Sector Plan***	***N/A***	***Medium-Low***	***Low***	***Medium-Low***
		Analysis of environmental considerations in most recent plan		✓	✓	✓
		Inclusion of project-specific impacts and broader sectoral impacts		✗	✗	✗
		Public access to relevant documents				
		Mechanisms to seek public input		✗	✗	✗
		Less-privileged and affected populations included		✗	✗	✗
		Communication of how public input is incorporated		✗	✗	✗
		Reasonable public comment period		✗	✗	✗
		Availability of public comments		✗	✗	✗

Environmental and Social Aspects (ESA)

INDICATOR	KEY ATTRIBUTES	INDIA	THAILAND	INDONESIA	PHILIPPINES
ESA 9	***Inclusion of Environmental Considerations in Sector Reform Process***	***Medium-Low***	***N/A***	***Low***	***Medium-Low***
	Inclusion of environmental considerations in official documents, before reform	✗		✗	✓
	Broad framing of environmental issues	✗		✗	✗
	Access to documents				
	Less restrictive confidentiality rules applied to reform related documents	✓		✗	✓
	Adequacy of public comment period	✗		✗	✗
	Effort to reach affected and less-privileged populations	✗		✗	✗
	Mechanisms to seek public input	✗		✗	✗
	Availability of public comments	✗		✗	✗
	Communication of how public input is incorporated	✗		✗	✗
ESA 10	***Public Participation Requirements in Environmental Impact Assessment (EIA) Laws and Procedures***	***Medium-Low***	***Medium***	***N/A***	***High***
	Participation mandate at scoping stages	✗	✗		✓
	Use of more than one mechanism	✗	✓		✓
	Adequate time period for comment	✗	✓		✗
	Release of full and summary reports, before approval	✗	✗		✗
	Existence of guidelines to define adequate public consultation	✗	✗		✓
	Availability of summery or full public comments	✗	✗		✗
	How public comments informed the findings/recommendations is discussed in final IA	✗	✗		✗
	Principle of free prior informed consent is incorporated into EIA guidelines for consultation	✗	✗		✓
ESA 11	***Comprehensiveness of Environmental Impact Assessment (EIA) policies, Laws, and Procedures***	***Low***	***Low***	***N/A***	***Low***
	National or electricity sector laws and policies are in place that specify or require EIAs for electricity sector activities	✓	✓		✓
	Electricity sector policies, regulations, or guidelines detail for project-level EIA	✗	✓		✓
	Electricity sector policies, regulations, or guidelines detail for project-level social impact assessment	✗	✗		✗
	Strategic assessments have been carried out to evaluate environmental or social objectives	✗	✗		✗
	Strategic assessment guidelines for electricity sector programs, plans, and policies exist	✗	✗		✗

Environmental and Social Aspects (ESA)

INDICATOR		KEY ATTRIBUTES	INDIA	THAILAND	INDONESIA	PHILIPPINES
	ESA 12	***Regulatory Response to Environmental and Social Petitions or Complaints***	***Medium***	***N/A***	***Low***	***Low***
		Formal cases or evidence of environmental or social complaints filed	✓		✓	✗
		Regulatory agencies have accepted them	✓		✗	✗
	ESA 13	***Quality of Engagement by Electricity Provider With Society and Potentially Affected Populations***	***Medium-Low***	***Medium***	***Medium-Low***	***Medium-Low***
		Existence of specific department / staff to engage with the public	✗	✓	✗	✗
		Requirement to engage public is defined in corporate policy	✗	✗	✗	✗
		Support to vulnerable weaker sectors to enable engagement	✗	✗	✗	✗
		Availability of information on how public can lodge complaints	✓	✓	✓	✓
		Disclosure of its own EIAs	✗	✓	✗	✗
		EIAs include non-technical summary and summary of public consultation	✗	✗	✗	✗
	ESA 14	***Capacity of Civil Society to Address Environmental and Social Aspects of Electricity Sector Decision-Making***	***High***	***High***	***High***	***High***
		At least one CSO has used appeal or redress mechanisms	✓	✓	✓	✓
		Existence of independent CSO assessment of ESA implications of sector policy exists	✓	✓	✓	✓
		Records of CSO participation in official consultations	✓	✓	✓	✓
		CSO input on most sector EIAs	✓	✓	✓	✗
		Evidence of CSOs specializing in sector issues or providing legal support to vulnerable groups	✗	✓	✓	✓
	ESA 15	***Quality of Judicial or Administrative Forums Addressing Social and Environmental Claims***	***High***	***High***	***Low***	***High***
		Issuing binding decisions to redress social and environmental damages	✓	✓	✗	✓
		Independence and impartiality	✓	✓	✗	✓
		Capacity and training	✗	✗	✗	✓
		Access to information	✓	✓	✗	✓
		Definition of triggers for claims and standing in laws	✓	✓	✗	✓
		Applicable provisions of law define what parties have "standing" before the forum	✓	✓	✗	✓
	ESA 16	***Accessibility of Judicial or Administrative Forums That Address Social and Environmental Claims***	***High***	***High***	***N/A***	***Low***
		Geographic	✗	✓		✗
		Temporal	✓	✗		✗
		Linguistic	✗	✗		✗
		Economic	✓	✓		✗
		Amicus briefs from non-parties	✓	✓		✗

Environmental and Social Aspects (ESA)

		KEY ATTRIBUTES	INDIA	THAILAND	INDONESIA	PHILIPPINES
INDICATOR	ESA 17	***Assessment of Job Losses Linked to Policy Changes or Reforms in the Electricity Sector***	***Low***	***N/A***	***N/A***	***Low***
		Evidence of assessment of at least two of the following employment impacts				
		Magnitude of job losses	✗			✗
		Effect on job security	✗			✗
		Impact on wages and benefits	✗			✗
		Significance to the macro economy	✗			✗
		Assessed before making changes	✗			✗
		Measures to address impact	✗			✓
		Creation of redress mechanisms for workers	✗			✓
	ESA 18	***Participation in Decision-Making about Access to Electricity***	***Medium***	***N/A***	***Low***	***Low***
		Consultation with relevant socio-economic sectors on developing access objectives	✓		✗	✗
		Efforts to reach vulnerable groups	✗		✗	✗
		Use of more than two participation mechanism	✓		✗	✗
		Public input referenced in relevant planning or policy processes	✗		✗	✗
	ESA 19	***Scope for Project-Affected People to Exercise Their Rights***	***Low***	***Low***	***Low***	***Medium***
		Existence of explicit requirements or procedures for consultation of project-affected people in project review and approval	✗	✗	✗	✓
		Efforts to educate potentially affected people on their rights	✗	✗	✗	✓
		Use of more than two participation mechanism				
		Free prior informed consent	✗	✗	✗	✗
			✗	✗	✗	✗
	ESA 20	***Participation in Decision-Making Related to Affordable Electricity Tariffs***	***Medium***	***Low***	***N/A***	***Medium***
		Attention to low-income and rural consumers in tariff setting principles	✓	✗		✓
		Efforts to communicate impacts and reasons for tariff changes to low-income or differentially impacted groups	✗	✗		✗
		Use of more than one participation mechanism to get their input	✗	✗		✗
	ESA 21	***Participation in Development of Policies to Promote Low Environmental Impact Management and Technology Options***	***Medium***	***Medium***	***N/A***	***Medium-High***
		Consultation with stakeholders and interest groups	✗	✗		✓
		Use of more than one participation mechanism	✗	✗		✗
		Decision-making considers at least three of following management and technology options				
		Co-generation	✓	✗		✓
		Demand-side management	✓	✓		✓
		Creation of energy saving companies	✗	✗		✗
		Grid-connected renewable energy technologies	✓	✓		✓
		Distributed renewable energy technologies	✓	✓		✓
		Improved thermal/fossil fuel generation technologies	✓	✗		✗
		Improved pollution control technologies for thermal power plants	✗	✗		✓
		Reduction of T&D losses	✓	✗		✓

Environmental and Social Aspects (ESA)

		KEY ATTRIBUTES	INDIA	THAILAND	INDONESIA	PHILIPPINES
INDICATOR	ESA 22	***Reporting on Environmental and Social Performance of the Electricity Sector***	***Medium***	***N/A***	***N/A***	***Medium***
		Regular reporting and disclosure of performance data	✗			✓
		Use of range of outreach media	✗			✗
		Development of public information for non-technical audience	✗			✗
		Annual reviews include attention to broad set of environmental and social issues – at least three of the following				
		Access to electricity	✓			✓
		Affordability	✗			✓
		Employment trends in the sector	✗			✗
		Theft/distribution losses	✗			✓
		Energy security	✗			✓
		Energy efficiency	✓			✓
		Renewable energy	✓			✗
		Air emission or pollution from generation	✗			✗
		Contributions to greenhouse gas emission	✗			✗

Regulatory Process (RP)

INDICATOR	KEY ATTRIBUTES	INDIA: *Andhra Pradesh*	INDIA: *Haryana*	INDIA: *Tamil Nadu*	THAILAND	INDONESIA	PHILIPPINES
RP 1	***Institutional Structure for Regulatory Decisions***	*High*	*High*	*High*	*High*	*Low*	*High*
	Through executive	✗	✗	✗	✗	✗	✗
	Through independent commission	✓	✓	✓	✓	✗	✓
RP 2	***Authority of the Regulatory Body***	*High*	*High*	*High*	*Low*	*Medium*	*Medium-High*
	Seek information	✓	✓	✓	✗	✓	✓
	Investigations	✓	✓	✓	✗	✓	✓
	Penalizing defaulters	✓	✓	✓	✗	✗	✓
	Enforcement of orders	✓	✓	✓	✗	✗	✗
RP 3	***Functions / Jurisdiction of the Regulatory Body***	*High*	*High*	*High*	*Medium-Low*	*Low*	*Medium*
	Clarity about functions / jurisdictions	✓	✓	✓	✓	✗	✓
	Entrustment of all critical functions	✓	✓	✓	✗	✗	✗
RP 4	***Selection of Regulatory Body Members***	*Medium-High*	*Medium*	*Medium-Low*	*Medium-Low*	*N/A*	*Medium-Low*
	Independence	✓	✓	✗	✗		✗
	Well-defined procedure	✓	✗	✓	✓		✗
	Transparency	✗	✗	✗	✗		✗
	Composition and eligibility criteria	✓	✗	✗	✓		✓
	Differing tenures	✓	✓	✓	✗		✓
RP 5	***Conflict of Interests of Regulatory Body Members***	*High*	*High*	*High*	*Medium*	*N/A*	*Medium*
	Legal recognition of conflict issues	✓	✓	✓	✓		✓
	Adequate preventive provisions	✓	✓	✓	✗		✗
RP 6	***Autonomy of Regulatory Body***	*Medium*	*High*	*High*	*Low*	*Low*	*Medium*
	Fixed tenure of members and well-defined removal procedures	✓	✓	✓	✗	✗	✓
	Financial autonomy	✓	✓	✓	✗	✗	✗
	Human resources	✓	✓	✓	✗	✗	✓
RP 7	***Appeal Mechanism***	*High*	*High*	*High*	*Low*	*N/A*	*High*
	Permission to appeal	✓	✓	✓	✗		✓
	Clarity about grounds of appeal	✓	✓	✗	✗		✓
	Filed by any affected party	✓	✓	✓	✗		✓
	Before another authority or forum	✓	✓	✓	✗		✓

Regulatory Process (RP)

INDICATOR	KEY ATTRIBUTES	INDIA: *Andhra Pradesh*	INDIA: *Haryana*	INDIA: *Tamil Nadu*	THAILAND	INDONESIA	PHILIPPINES
RP 8	***Training of Regulatory Body Members and Staff***	*Medium*	*Medium*	*Medium*	*N/A*	*N/A*	*Medium-High*
	Certainty and regularity	✗	✗	✗			✓
	Diverse fields of training (legal, technical, and financial)	✓	✓	✓			✓
	Diversity of perspectives	✗	✗	✗			✗
RP 9	***Information Available to Public Regarding Use of Consultants***	*Low*	*Low*	*Low*	*N/A*	*N/A*	*Low*
	Terms of reference	✗	✗	✗			✗
	Budget	✗	✗	✗			✗
	Selection process	✗	✗	✗			✗
	Final reports	✗	✗	✗			✗
	Ease of availability	✗	✗	✗			✗
	Timeliness of availability	✗	✗	✗			✗
RP 10	***Procedural Certainty about Regulatory Process and Decisions***	*High*	*High*	*High*	*N/A*	*N/A*	*High*
	Clear, well laid-out rules of procedure	✓	✓	✓			✓
	Clear, well laid-out rules for substantive decision-making	✓	✓	✓			✓
RP 11	***Proactiveness of Regulatory Body***	*Medium*	*Low*	*Medium*	*N/A*	*N/A*	*Low*
	Use of penal powers	✗	✗	✗			✓
	Suo motu petitions	✗	✗	✗			✗
	Discussion papers and public debate	✗	✗	✓			✗
RP 12	***Disclosure of Documents in Possession of Regulatory Body***	*Medium*	*Medium-high*	*Medium*	*Medium-High*	*Medium*	*Medium*
	Legal provisions	✗	✓	✓	✓	✗	✓
	Operating procedures	✗	✗	✓	✗	✗	✗
RP 13	***Procedure for Public Access to Regulatory Body Documents***	*Medium*	*Medium*	*Medium-Low*	*Medium*	*Low*	*Medium-Low*
	Well-indexed database of documents	✗	✗	✗	✓	✗	✗
	Simple, well-defined procedure for inspection	✓	✓	✓	✗	✓	✗
	Reasonable cost	✓	✓	✓	✓	✗	✓
	Wide dissemination of information	✗	✗	✗	✗	✗	✗
RP 14	***Space for Public Participation in the Regulatory Process***	*Medium-high*	*High*	*Medium-high*	*N/A*	*Medium*	*Medium*
	Open proceedings	✓	✓	✓		✗	✓
	Public right to participate	✗	✓	✗		✓	✓

Regulatory Process (RP)

INDICATOR	KEY ATTRIBUTES	INDIA: *Andhra Pradesh*	INDIA: *Haryana*	INDIA: *Tamil Nadu*	THAILAND	INDONESIA	PHILIPPINES
RP 15	***Institutional Mechanism for Representation of Interests of Weaker Sections / Stakeholders***	*Low*	*Medium-Low*	*Low*	*N/A*	*Medium*	*Low*
	Routine consideration of input	✗	✗	✗		✓	✗
	Opportunities to consider ad hoc input	✗	✓	✗		✗	✗
	Availability of diverse institutional structures	✗	✗	✗		✓	✗
RP 16	***Capacity Building of Weaker Stakeholders***	*Low*	*Low*	*Low*	*Low*	*N/A*	*Low*
	Capacity building activities by different agencies	✗	✗	✗	✗		✗
	Availability of financial and analytical resources	✗	✗	✗	✗		✗
RP 17	***Interventions by Civil Society in the Regulatory Process***	*Medium*	*Medium-Low*	*Medium*	*N/A*	*Medium*	*Medium*
	Filing of cases/appeals before the ERC	✓	✓	✓		✓	✓
	Private interest cases and appeals	✓	✓	✓		✗	✓
	Public interest cases and appeals	✓	✗	✓		✓	✓
	Presence of active CSOs	✓	✗	✓		✗	✗
RP 18	***Orders and Decisions of the Regulatory Body***	*High*	*Medium*	*High*	*Low*	*Low*	*High*
	Reasoned orders	✓	✓	✓	✗	✗	✓
	Response to public comments	✓	✓	✓	✗	✗	✓
RP 19	***Dissemination of Regulatory Body's Decisions***	*Medium*	*Medium*	*Medium*	*N/A*	*Medium*	*Medium*
	Easy availability	✗	✓	✓		✗	✗
	Timely availability	✓	✓	✗		✗	✓
	Local language	✓	✗	✓		✓	✗

Regulatory Process (RP)

INDICATOR		KEY ATTRIBUTES	INDIA: *Andhra Pradesh*	INDIA: *Haryana*	INDIA: *Tamil Nadu*	THAILAND	INDONESIA	PHILIPPINES
	RP 20	***Periodic Performance Reports by Licensees / Utilities***	*Medium-Low*	*Medium*	*Medium-Low*	*N/A*	*N/A*	*Medium*
		Periodic filling by the utilities	✓	✗	✓			✓
		Well-defined consequences of not filing	✗	✗	✗			✓
		EoQ of effective periodic reporting						
		Easy availability	✗	✓	✗			✗
		Timely availability	✗	✓	✗			✗
		Local language	✗	✗	✗			✗
		Reliable	✗	✗	✗			✗
		Comprehensive	✗	✓	✗			✗
	RP 21	***Tariff Philosophy***	*Medium-Low*	*Medium*	*Medium-High*	*Medium-Low*	*Medium-Low*	*Medium*
		Existence	✓	✓	✓	✓	✓	✓
		Based on detailed analysis	✗	✓	✓	✗	✗	✓
		Provision for mitigating adverse impacts	✗	✓	✗	✗	✓	✓
		Simple language	✗	✗	✓	✗	✗	✗
		Public participation	✓	✓	✓	✗	✗	✗
	RP 22	***Licensing***	*High*	*High*	*High*	*N/A*	*N/A*	*High*
		Clarity about requirement and exemption	✓	✓	✓			✓
		Clarity about process	✓	✓	✓			✓
		Clear provisions regarding	✓	✓	✓			✓
		Amendment / revocation	✓	✓	✓			✓
		Dispute resolution	✓	✓	✓			✓
		Compliance / performance monitoring	✓	✓	✓			✓
	RP 23	***Consumer Service and Quality of Supply***	*Medium-High*	*Medium-High*	*Medium*	*Medium*	*N/A*	*Medium-High*
		Well-defined standards of performance	✓	✓	✓	✓		✓
		Monitoring of supply quality	✓	✗	✗	✓		✓
		Periodic public review	✗	✗	✗	✗		✗
		Consumer grievance redress mechanism	✓	✓	✓	✗		✓

The Electricity Governance Assessment in India

RESEARCH TEAM

Organization	Experience
Centre for Policy Research (CPR) *Delhi* http://www.cprindia.org	CPR is an autonomous institution and a think tank. The cCentre is one of the 27 national social science research institutes recognized by the Indian Council of Social Science Research, Government of India. CPR was established with the objective of studying major policy issues before the nation to help develop a body of knowledge about policy-making and to suggest alternative policy options. Sudha Mahalingham led work on the electricity governance initiative at the Centre for Policy Research.
Center for Environment Concerns (CEC) *Andhra Pradesh*	CEC undertakes public interest and works on environmental issues, and has an established record working to advance the interests of rural communities in Andhra Pradesh. CEC also houses the People's Monitoring Group on Electricity Regulation, which is led by Dr. M. Thimma Reddy. CEC has been actively involved with promoting transparency and accountability at the Andhra Pradesh regulatory body.
Praja, *Haryana*	Praja is an NGO working on promoting public accountability in the electricity sector. Dr. Surinder Kumar, a professor, and Mr. Rajesh Kumar, a Ph.D. student at the Maharishi Dayanand University in Haryana, are affiliates of Praja and will be leading its contribution to the electricity governance assessment in India. Dr. Kumar's research group at the university has developed a scope of work focused on regulatory economics and has a track record of engagement with regulators in the state. The group has made numerous interventions before the Haryana Electricity Regulatory Commission. Ph.D. candidates in this program will be contributing researchers for the electricity governance assessment in the state of Haryana.
Citizen consumer and civic Action Group (CAG) *Tamil Nadu* http://cag.org.in	CAG is a nonprofit, nonpolitical, and professional citizens group that seeks to make critical policy changes through strategic interventions to benefit the citizen-consumer. CAG has been involved in regular advocacy with the Tamil Nadu Electricity Regulatory Commission (TNERC) in response to proposals submitted by the state electricity utility and through participation in the public hearings. In addition, CAG has an established track record on environmental issues.

ADVISORY PANEL

Mr. J. L. Bajaj, Distinguished Fellow, The Energy and Resources Institute (TERI) and former Chairman of the Uttar Pradesh Regulatory Commission

Rachel Chaterjee, Chairman and Managing Director, Transmission Corporation of Andhra Pradesh

Dr. Madhav Godbole, former Home Secretary of the government of India

Dr. Pratap Bhanu Mehta, Director of the Center for Policy Research

Mr. Nasser Munjee, former Director of the Infrastructure Development Finance Company of India

Vedamoorthy Namasivayam, Executive Director, Price Waterhouse Coopers Associates Private Ltd., India

Mr. Suresh Prabhu, former Minister of Power of India

Mr. M. G. Ramachandran, Senior Advocate, National Thermal Power Corporation, Power Grid Corporation and Power Trading Corporation

Mr. Ajay Shankar, Additional Secretary of the Ministry of Power of India

The Electricity Governance Assessment in Indonesia

RESEARCH TEAM

Organization	Experience
Indonesian Institute for Energy Economics (IIEE) http://www.iiee.or.id	IIEE was established in 1995 in Jakarta as a nonprofit, nongovernment, independent organization. Its primary objective is to enhance energy economics studies that motivate and support national policies for prudent development and utilization of energy resources in Indonesia. IIEE has been actively involved in the development of public awareness and capacity building to convey the importance of optimal and efficient energy resources management.
World Wide Fund for Nature (WWF) Indonesia www.wwf.or.id/	WWF in Indonesia has been working on climate change and renewable energy. It is also part of WWF Asia's "Our Power" campaign, which looks to promote democratization in the electricity sector.
Indonesian Center for Environmental Law (ICEL) http://www.icel.or.id	ICEL specializes in research and capacity building, advocacy, and community empowerment. It seeks to defend public interests by pursuing the recognition of their rights with respect to the environment and natural resources. ICEL also endeavors to enhance the capability of environmental NGOs and the government of Indonesia with respect to good environmental governance, establishing the sustainable management of environment and natural resources on a democratic basis by maintaining human rights values, democratization, and the rule of law. ICEL led work on the Access Initiative Assessment of Environmental Governance in Indonesia.
People Centered Economic and Business Institute (IBEKA) http://ibeka.port5.com/	IBEKA's main objective is to work in rural areas with village communities to make environments more conducive to the growth of people-centered economic systems, with an emphasis on energy and electricity services. IBEKA has extensive experience setting up micro-hydro systems for rural communities in Indonesia.
Working Group on Power Sector Restructuring (WG-PSR)	WGPSR, established in 2001 at Jakarta, is a group of NGOs conducting advocacy in the energy sector in Indonesia, particularly the power sector. WGPSR aims to enhance transparency and accountability in the Indonesian energy sector and increase public participation in the decision-making process. WGSPR works on providing alternative policy and ideas through campaigns, lobbying, and education. WGPSR has eight members: INFID, ICW, YLKI, PIRAC, IGJ, DebtWatch, LBH Jakarta, Yayasan GENI.
Pelangi http://www.pelangi.or.id/	Pelangi is a global environmental think tank that seeks to form a society that self-governs and secures the quality of its natural resources and environment while pursuing equitable and democratic socio-economic well-being. It has a long-standing program on climate change and energy. Pelangi has undertaken work on power sector policy, energy efficiency, public benefits in electricity sector restructuring, and renewable energy. It is part of the Global Village Energy Partnership.

ADVISORY PANEL

Mr. Faisal Basri, Commissioner, Oversight Comission for Business Competition, and Lecturer at University of Indonesia

Dr. Bambang Brodjonegoro, Independent Commissioner PT PLN Persero, and Dean of Economic Department, University of Indonesia

Mr. Endro Utomo Notodisuryo, Transparency International, and former Director General of Electricity & Energy Development

Dr. Irwan Prayitno, Legislator, House of Representatives, and Member of Comission VII (Energy, Environment, Research, and Technology)

Dr. Umar Said, former Secretary General of the Ministry of Energy and Mining, and Lecturer at the University of Indonesia

Mr. Puguh Sugiharto, former Chairman of the Working Group for Good Governance in the Electricity Sector, Member of the Renewable Energy Society, and Director of PEN Consulting

Dr. Bambang Adi Winarso, Deputy Director of Social Electricity Development, Directorate General of Electricity and Energy Utilization – Ministry of Energy

The Electricity Governance Assessment in the Philippines

RESEARCH TEAM

Organization	Experience
Green Independent Power Producers, Inc. (GRIPP) http://www.cleanenergy-negros.com.ph	GRIPP is a collaborative undertaking of various local and international stakeholders, including Preferred Energy Incorporated, Greenpeace-Southeast Asia Energy Campaign, Philippine Rural Reconstruction Movement, and Solar Electric Company, Inc. It aims to facilitate multi-stakeholder inputs in power sector decision-making to develop green energy. GRIPP seeks to demonstrate that renewable energy can present a viable alternative to grid based fossil fuel power, through a mix of energy options linked to the local economy and livelihood generation such as biomass cogeneration plants and wind farms for on-grid applications, off-grid electrification, and energy efficiency. Maitet Diokono, Eileen Chi Co, and Dean La Paz led work on the EGI assessment, with the support of Athena Ronquillo Ballasteros.
Action for Economic Reforms (AER) http://www.aer.ph	Founded in 1996 by a group of progressive scholars and activists, AER is an independent, reform-oriented public interest organization that conducts policy analysis and advocacy on key economic issues. AER undertakes research to obtain information, deepen knowledge, and generate resources, which are used to develop policy proposals and alternatives. AER emphasizes the complementariness of the market and state planning. Market instruments, when appropriately used, can serve progressive goals, but may also intensify inequities and further marginalizing the poor. Development planning, social regulation, and institutional interventions have to compensate for the market's weaknesses and limitations.
Development Academy of the Philippines (DAP) http://www.dap.edu.ph/	DAP was established in June 1973 to assist in the country's development efforts as change catalyst and as capacity-builder. It has assisted in shaping new government policies, crafting innovative development programs, and modernizing the management of government agencies and private enterprises. As a change catalyst, DAP has played the role of "think tank" for government. Many of DAP's programs and social technologies have been institutionalized as well. As a capacity-builder, it has enabled people and institutions, especially those in public and community service, to carry out their tasks effectively. DAP is a world class National Development and Productivity Organization that builds capacities and partnerships among the key sectors of Philippine society; generates innovative, value-adding, and synergistic solutions to national and local concerns; and seeks to promote sustainable human development and global competitiveness.

ADVISORY PANEL

Mr. Rufino Bomasang, former Under Secretary of the Department of Energy

Ms. Maria Concepcion Pabalan, Managing Director, Development Academy of the Philippines

Mr. Antonio del Rosario, former Chairman of the World Energy Council

Mr. Bobby Julian, Finance Director, Preferred Energy International

Mr. Crisanto Laset Jr., Cagayan Electric Power & Light Co. (CEPALCO)

The Electricity Governance Assessment in Thailand

RESEARCH TEAM

Organization	Experience
Health Systems Research Institute www.hsri.or.th	The Health Systems Research Institute is an autonomous branch of the Thai Ministry of Public Health, with a longstanding research program exploring the environmental health implications of the energy sector. The Health Systems Research Institute led the Thai Electricity Governance Assessment.
Palang Thai ttp://www.palangthai.org	Palang Thai is a Thailand-based nonprofit organization that works to ensure that the transformations that occur in the region's energy sector are economically rational and that they augment, rather than undermine, social and environmental justice and sustainability. Palang Thai conducts works with Thai NGOs, universities, businesses, and government agencies to analyze electricity planning and policy from a public interest perspective. Its programs of work also include the Thai Net Metering Project (VSPP), which promotes the implementation of small-scale grid-connected renewable energy projects, and the Border Green Energy Team (BSEP), which provides hands-on solar and micro-hydro training for villages on both sides of the Thai/Burma border.
Thailand Environment Institute (TEI) http://www.tei.or.th/main.htm	TEI is a nonprofit, nongovernment organization focusing on environmental issues and the conservation of natural resources in Thailand. Founded on the belief that partnerships are the most effective approach to achieving a more sustainable way of life, TEI advocates a participatory approach to shared environmental responsibility. By working closely with the private sector, government, local communities, other civil society partners, and academia and in international circles with international organizations, TEI helps to formulate environmental directives and link policy with action to encourage meaningful environmental progress in Thailand. TEI is a core team partner in The Access Initiative.

continued next page

The Electricity Governance Assessment in Thailand

RESEARCH TEAM

Organization	Experience
King Prajadhipok's Institute (KPI) http://www.kpi.ac.th	KPI is an independent, academic, public organization under the supervision of the National Assembly. The institute undertakes academic work including research, training, and seminars; disseminates information on development of democracy and governance; and provides consultation on effective governance at the local and national level. KPI coordinates and cooperates with local, foreign, and international agencies with the common goal of creating sustainable democracy.
Confederation of Consumer Organizations	The Confederation of Consumer Organizations of Thailand is comprised of 21 member organizations from around the country that represent such areas as labor, farmers, health, and women's rights. Members convene monthly to review successes, challenges, and outline next steps in promoting consumer education and protection through an existing local network that reaches consumers at the grassroots level.

ADVISORY PANEL

Ms. Ratchanee Aemaruji, Director, Bureau for Public Participation Promotion
Dr. Piyasawasti Amranand, Energy for Environment Foundation
Mr. Gaewsan Atipo, Senator, and Chair of the Senate Committee on the Environment
Mr. Amporn Duangparn, Local community leader
Mr. Veerapol Jirapraditkul, Deputy Director, Energy Policy and Planning Office, Ministry of Energy
Mr. Lek Kudwonggaew, Local community leader
Dr. Praipol Kumpsub, Faculty of Economics, Thammasat University
Mr. Suvin Laohaprasit, Electricity System Research and Development
Dr. Wichit Loajirachunkul, School of Applied Statistics, National Institute of Development Administration
Mr. Jane Namchaisiri, Federation of Thai Industries
Dr. Duaenden Nikomborirak, Thailand Development Research Institute
Mr. Witoon Permpongsajaroen, Project for Ecological Recovery
Mr. Pairoj Polphet, Union for Civil Liberty
Mr. Charit Ruengwiset, Governor, Metropolitan Electricity Authority
Mr. Cherdpong Siriwit, Permanent Secretary, Ministry of Energy
Ms. Parichart Siwaraksa, The Subcommittee on Industry and Energy, The National Human Rights Commission
M. L. Apimongkol Sonakul, MP and member of the MP Energy Committee
Mr. Sophon Supapong, Senator
Dr. Chanin Thongthammachad, Deputy Permanent Secretary, Office of Natural Resources and Environmental Policy and Planning
Dr. Wanchai Wattanasub, Director, Center for Peace and Good Governance

ABOUT THE ELECTRICITY GOVERNANCE INITIATIVE

The Electricity Governance Initiative (EGI) is a collaboration of civil society, policy-makers, regulators, and other electricity sector actors to promote the open, transparent, and accountable decision-making processes that are necessary to reach a socially and environmentally sustainable energy future. The EGI is a joint undertaking of the World Resources Institute and Prayas Energy Group (India). The National Institute of Public Finance and Policy (India) was centrally involved in developing the EGI indicator toolkit and implementing the assessments in Asia. EGI is a partnership for sustainable development registered with the UN Commission on Sustainable Development.

THE WORLD RESOURCES INSTITUTE

The World Resources Institute (WRI) is an environmental think tank that goes beyond research to create practical ways to protect the earth and improve people's lives. WRI meets global challenges by using knowledge to catalyze public and private action:

- To reverse damage to ecosystems. We protect the capacity of ecosystems to sustain life and prosperity.
- To expand participation in environmental decisions. We collaborate with partners worldwide to increase people's access to information and influence over decisions about natural resources.
- To avert dangerous climate change. We promote public and private action to ensure a safe climate and sound world economy.
- To increase prosperity while improving the environment. We challenge the private sector to grow by improving environmental and community well-being.

In all of its policy research and work with institutions, WRI seeks to build bridges between ideas and action, meshing the insights of scientific research, economic and institutional analyses, and practical experience with the need for open and participatory decision-making. WRI is the coordinating body and secretariat for EGI.

PRAYAS ENERGY GROUP

Prayas is a registered charitable trust based in Pune, India. Its activities cover four substantive areas: health, energy, learning and parenthood, and resources and livelihoods. Prayas engages in policy analysis and advocacy in the electricity sector and capability-building of institutions in civil society. Its past work includes an analysis of the power purchase agreement between Dabhol Power Company (DPC) and the Maharashtra State Electricity Board (MSEB); development of a least-cost integrated resource plan (IRP) for the state of Maharashtra, India; an analysis of agricultural power consumption and subsidy; a study of the regulatory aspects of the Orissa (India) model of power sector reforms, and a critique of the activities of, and lending by, multilateral development banks for the energy sector in India.

NATIONAL INSTITUTE OF PUBLIC FINANCE AND POLICY

The National Institute of Public Finance and Policy (NIPFP) in India is a center for applied research in public finance and public policy. It aims to contribute to policy-making in spheres relating to public economics. NIPFP's work on electricity governance is supported by a program that focuses on governance concerns in infrastructure.

WORLD
RESOURCES
INSTITUTE

10 G Street, NE
Washington, DC 20002 USA

www.wri.org

प्रयास
आरोग्य, ऊर्जा, शिक्षण आणि पालकत्व
या विषयांतील विशेष प्रयत्न

PRAYAS
ENERGY
GROUP

Amrita Clinic, Athawale Corner, Karve Road
Pune-411 004 India

http://www.prayaspune.org/peg/

ISBN 978-1-56973-645-6
69000
9 781569 736456