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Introduction to the Special Issue: Governing Energy in a Fragmented World

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Abstract

This special issue brings together leading experts from Asia, Europe and North America to examine the international institutions, national governance mechanisms and financing systems that together will determine the future of the energy sector. The enormous environmental externalities imposed by fossil fuel extraction and consumption, the devastating corruption and human rights abuses that have accompanied this energy system, and the geopolitical vulnerabilities that have arisen because of the uneven natural distribution of these resources, have occasioned enormous handwringing – but not, yet, a shift to a more rational system of providing energy services. Although national governments play the dominant role in energy governance, these challenges are beyond the scope of any single national government to manage, making energy policy a key component of global governance and international relations.

For two centuries, industrial development, economic prosperity and increasingly national security have depended on fossil fuel energy sources. Energy security – and thus national security in both its military and economic components – has been defined in terms of reliable and affordable access to those sources. The enormous environmental externalities imposed by fossil fuel extraction and consumption, the devastating corruption and human rights abuses that have accompanied this energy system, and the geopolitical vulnerabilities that have arisen because of the uneven natural distribution of these resources, have occasioned enormous handwringing – but not, yet, a shift to a more rational system of providing energy services.

The irrationality of the current energy system is becoming more and more widely recognized. Climate change has climbed up the political agenda nearly everywhere, escalating pressures for a transformation of the energy sector, which contributes roughly two-thirds of annual global greenhouse gas emissions. Geopolitical tensions have erupted over potential energy resource conflicts in the South China Sea and East China Sea. Perhaps less high profile, but growing in importance, concerns have also developed over the human rights and governance challenges inherent in an energy system that depends primarily on the extraction of fossil

fuels, often from countries that lack the institutions to cope.

To date, growing recognition of the problems has not translated into much in the way of improved global energy governance. Traditional energy security thinking and the imperatives of using more energy to raise living standards in poorer parts of the world has pushed many governments to continue to invest financial, diplomatic and even military resources in securing traditional energy resources. So far, climate change and good governance concerns have failed to convincingly reorient the energy sector toward a large-scale transformation away from fossil fuels. There is no agreement on what path to follow to a low-carbon future. And in the absence of effective action, the multiple and manifest failures of energy policies throughout the world have become central to the world's most pressing challenges: climate change and environmental sustainability; poverty alleviation; national governance and human rights protection; and geopolitical stability.

Although national governments play the dominant role in energy governance, these challenges are beyond the scope of any single national government to manage, making energy policy a key component of global governance and international relations. But as the articles in this special issue make clear, the current fractured,

complex landscape of global energy governance is not up to the task. There are separate regimes for oil, coal and nuclear energy sources, and the beginnings of regimes around clean energy and energy efficiency, none of which are well coordinated with each other. Moreover, these energy-focused regimes interface with trade, investment and development assistance institutions which strongly shape energy in an uncoordinated and often inchoate manner. Within each institution are significant problems of efficacy and legitimacy. These multiple transborder governors and rule systems lack shared principles or norms, and have limited ability to ensure that global energy governance considerations are reflected in national policy measures. And where they are influential, the national energy governance and regulatory systems that are needed to carry out whatever global rules are developed may lack the capacity and coherence to do so. The fossil fuel system continues to be deeply entrenched in national political economies, and energy policy remains overwhelmingly under national control, often in the hands of powerful national institutions with questionable incentives to act in the public interest. This reality sits uneasily with the growing manifestation and urgency of global energy challenges. Yet despite the importance of understanding energy's place in global policy, only recently have scholars and policy analysts begun to investigate the objectives, rule systems and gaps in global energy governance.

Themes of the special issue

This special issue brings together leading experts from Asia, Europe and North America to examine the international institutions, national governance mechanisms and financing systems that together will determine the future of the energy sector. Our approach differs from other work on global energy governance in several key ways:

- It goes beyond an examination of institutions explicitly aimed at global energy governance to include those that indirectly govern energy, and the interactions across, and gaps between, the array of international institutions relevant to energy.
- It explicitly conceptualizes global energy governance as a challenge of understanding interactions between the global and national levels of energy governance.
- It pays particular attention to the implications for energy governance of what may be the most significant international trend of our era: the rise of Asia. Asia merits such attention both as a source of new stresses in global energy governance and as a potential supplier of solutions. As a populous, rapidly growing region of increasing political importance, the rise of Asia poses a particular challenge, with the

concomitant need to incorporate Asian actors into existing and emerging systems of energy governance.

In the discussions that led to this special issue, we found that three broad trends underlie the recent evolution of global energy governance, and these three are reflected throughout the remainder of this special issue. First is the shift to an increasingly multipolar world, one in which the Asian giants, China and India, are quickly becoming central actors. The 'rise of the rest' portends a multipolar complexity of major powers with competing interests and world views, a reality that renders extraordinarily difficult the challenge of creating institutions that can bring about a transition to a clean, sustainable, secure, effective, efficient and equitable energy system.

Second is the emergence of pro-market ideologies in the 1980s and 1990s, which has been followed by two types of backlash. During the 1980s and 1990s, many countries privatized or deregulated their energy sectors, often with the support of (or pressure from) various funders and international organizations. Of late, however, the pro-market ideology that has so transformed the energy sector in many countries faces new competition from a resurgent model of state capitalism. State-owned companies now control most of the world's oil reserves, and such new consumers as China and India are blending the use of markets with more open forms of state steering in meeting their energy needs. In addition, efforts to privatize and deregulate have also run up against spreading norms related to demands for citizen empowerment, governmental transparency, civil society participation, and accountability, all of which have been used by civil society actors to challenge the legitimacy of market-led energy transformations.

Third, the emergence of climate change as a key issue on the global agenda is creating a new frame for the discourse on energy policy. For decades, global institutions and national governments have been remarkably persistent in keeping climate on a separate track from energy policy, but the irrefutable logic of combining the two – energy accounts for roughly two-thirds of the greenhouse gas emissions responsible for climate change – is gradually forcing them together.

Overview of the special issue

This volume is organized around three dimensions of global energy governance:

- **Formal institutions of global energy governance**
The existing intergovernmental organizations that address energy are unlikely to measure up to the increasing scale of the challenge. Formal organizations and regimes relevant to energy security – such as the International Energy Agency, OPEC or the G8/G20 – add

up to fragmented governance at best, each with partial scope, limited membership and/or weak authority.

- **National governance processes**

Due to the close relationship between industrial growth and energy security, national governments have historically held close control over energy-related decisions. However, national governance processes that formulate energy policy and regulate the energy sector are poorly understood, and plagued by corruption and fragmentation. Understanding the interactions between these national governance processes and the international institutions and financing processes is crucial to understanding what accounts for existing outcomes and where and how reforms may be possible.

- **Transnational energy financing and trade rules**

A third set of institutions have powerful influence on when, where and which energy sources are developed, what services are delivered and to whom. These include trade and investment rules including the World Trade Organization (WTO) and bilateral investment treaties; and public financial institutions such as multilateral development banks and export credit agencies that influence public and private financial flows.

Each of these topics represents a significant contribution by itself to our understanding of how energy is governed. But this issue's more ambitious scope also explores the interactions across the three. The authors draw on a range of key theories to understand the current landscape and its gaps, including work that focuses on regimes, regime complexes and institutional interplay, along with work focusing on agents and governors and their interactions with structures at the global level and with theories that explore multiscalar governance.

The lead article by Dubash and Florini, 'Mapping Global Energy Governance', lays out the need to pay attention to four sets of objectives simultaneously: sustainability, economic development/poverty, geopolitical stability and domestic governance. International declarations and scholarly articles are increasingly drawing attention to the numerous transnational energy market and governance failures that underlie the great challenges in all four arenas. But to date the world has not devised institutions that effectively set priorities and manage trade-offs across these challenges, nor have most national governments found effective means of linking national and global energy processes. The article's portrayal of the overall landscape of relevant formal and informal institutions reveals a scene of considerable complexity and chaos. Finding the levers for change requires attention to both the global and national levels of energy governance and to the interactions between them. It also requires attention to the multiplicity of actors – corporations, nongovernmental organizations,

professional associations and the like – that are playing an increasingly active role in governing energy.

We then turn to the formal intergovernmental institutions. The Organization of Petroleum Exporting Countries (OPEC), famous for its role in the 1970s oil embargo and price hikes, turns out to be a surprisingly minor player, according to Goldthau and Witte. The G8 has frequently issued statements on energy, and starting with the 2005 Gleneagles Summit has featured prominently in the energy component of climate change debates – but the G8's future is in doubt given the rise of the G20. Although both summit processes lack the deeper institutionalization to grapple effectively with major global market and governance failures, there may be scope for a significant role in setting broad global norms and goals, argue Van de Graaf and Westphal. The tiny but technically competent International Energy Agency (IEA) has come closest to serving as a comprehensive energy IGO – but with its limited membership (OECD countries only), small staff (fewer than 250) and close ties to G8 processes that are themselves not certain to continue, the IEA's future role remains in question, says Florini.

Next are three articles addressing national-level decision making on energy. The need for the inclusion of China (Kong) and India (Dubash) is obvious, given their enormous size and increasing international influence. The Philippines (La Vina et al.) (which with 80 million inhabitants would be considered a large country in any region other than Asia) has been included as a case of a rule taker in global energy governance. The three articles find that national energy governance is just as fragmented and inconsistent as its international counterpart. This is unsurprising, as the multiplicity of energy subsectors and the linkages to other important issue areas (including everything from economic growth to agriculture to national security environment) suggests the likelihood of a complex decision-making architecture. This complexity, in turn, poses challenges to understanding the linkages between national and global energy governance processes, and in particular the ability of global processes to shape national decision making.

The special issue then turns to the international political economy of energy. A well-known rule of investigation says 'follow the money', and following the cross-border financial flows connected to energy reveals a great deal about why energy policy is so dysfunctional. The sums involved are vast: the IEA's annual *World Energy Outlook* has continually increased its estimates of the amount needed in new investments, with 2010 figures that some US\$26 trillion in new investment is needed simply to keep pace with projected market demand for energy between now and 2030, with an additional \$10 trillion or so to move energy investment on to a climate-friendly path that stabilizes greenhouse gas concentrations at 450 ppm. Even with those levels

of new investment in energy, we would see little improvement in energy poverty indicators.

Newell notes that such huge sums will have to come primarily from the private sector, and gives a useful typology of three types of existing governance mechanism: public governance of public finance (such as World Bank loans to governments); public governance of private finance, which he notes is often more concerned with promoting energy investment than with regulating or steering it; and private governance in the form of the many initiatives that have sprung up to try to plug gaps in global energy governance. Ghosh then provides a survey of the complex landscape of trade and investment rules at both regional and multilateral scales, highlighting the considerable degree to which these institutions fall short of the capacity to overcome the key market and governance failures in energy or to address the trade-offs across them. He suggests a range of potential improvements. Nakhouda takes us into an in-depth analysis of two key energy funders – the World Bank and the Asian Development Bank – and explores their operations in Asia to better understand what reforms are needed within the organizations, and what factors shape the roles played by Asian governments in those bodies. Wright similarly drills down into a specific institution and region, in his case export credit agencies and the (mostly fossil fuel) energy projects they finance in Asia, examining pressures to harmonize their standards and to incorporate sustainability criteria.

We conclude the special issue by exploring an important innovation that cuts across a variety of energy governance challenges – demands for information disclosure. This is no easy task, given that information has been notably lacking in everything from oil markets to the environmental consequences of particular energy products (Florini and Saleem). Disclosure mechanisms are emerging in response to existing governance gaps related both to efficient market functioning and to democracy. The article explores market-based initiatives, such as the Joint Oil Data Initiative, carbon disclosure initiatives and requirements that firms disclose climate-related risks as part of their normal reporting, along with initiatives aimed at empowering citizens, such as the Extractive Industries Transparency Initiative and a number of information access initiatives in the electricity arena.

Beyond the special issue

The picture painted in this special issue is a somewhat grim portrayal of incoherent governance in crucial arenas. But there are glimmerings of intriguing developments on both the academic and policy fronts. On the academic side, this special issue as well as the recent articles and books referenced in these pages are beginning to provide a more theoretically informed under-

standing of the current condition of global energy governance. As this special issue goes to press, important new works continue to appear, such as Colgan, Keohane and Van de Graaf's (2011) article on what they see as a regime complex for energy.

On the policy side, a range of recent institutional innovations suggest efforts to construct approaches to global energy governance that go beyond formal international organizations. These new efforts are aimed at coordinating and harmonizing upward national actions of various sorts. The Clean Energy Ministerial, for example, was initiated at the 2009 Copenhagen climate change conference as an effort to accelerate a global transition to a clean energy system, and was followed by a meeting at Abu Dhabi in early 2011, with more planned for subsequent years in the UK, India and South Korea (<http://www.cleanenergyministerial.org/>). This initiative seeks to drive market transformation in part by setting specific targets, such as eliminating the need to build more than 500 midsize power plants in the next 20 years, and bringing improved energy services to more than 10 million people without access to electricity by 2015. A related initiative, the Major Economies Forum Global Partnership, has prepared Technology Action Plans laying out best-practice blueprints for actions in ten key technology areas such as energy efficiency standards. At the same time, multilateral processes, notably the climate negotiations, continue along their well-worn tracks. The interaction of emergent soft law instruments with older hard law constructions and the specifics of national energy politics could potentially allow for a much improved global system, if good policy choices are made – but such an outcome will depend on a much deeper understanding of the intricacies of global energy governance.

Origins of the project and thanks

The special issue has evolved from work done under the auspices of the S. T. Lee Project on Global Governance at the LKY School of Public Policy, National University of Singapore. This project was launched in 2008 to bring together scholars from Asia, Europe and North America to investigate how basic questions about sovereignty and institutional diversity in world affairs are being addressed in key issue areas. From 2009 to 2010 the project convened an international study group to explore the ways in which energy cuts across the most profound questions of international order, investigating the institutional mechanisms that exist to govern the cross-border components of energy policy, how energy policy is understood in key countries and what prospects exist for improvements in global energy governance. Most of the articles in this special issue are based on papers commissioned for the study group. Thanks are due to the LKY

School and its Dean, Kishore Mahbubani, to Dr S. T. Lee and the MacArthur Foundation's Asia Security Initiative for their generous support, and to all members of the study group for their intensive engagement with this bewilderingly complex field. In addition to those whose papers appear in this issue, we would particularly like to thank several other study group members for their valuable contributions to the discussions that framed this special issue: Jeff Colgan, Kirsty Hamilton, Athena Ronquillo-Ballesteros, Benjamin Sovacool and Xu Xiaojie. We also want to thank the project staff for all the work that made the project and the special issue possible.

And we thank the editors and staff of *Global Policy* for according us the honor of serving as guest editors of the journal's first special issue.

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- Colgan, J. D., Keohane, R. O. and Van de Graaf, T. (2011) 'Punctuated Equilibrium in the Energy Regime Complex', *Review of International Organizations* [online]. Available from: <http://www.springerlink.com/content/120057/?Content> [Accessed 6 August 2011].