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The New Energy Order

Managing Insecurities in the Twenty-first Century

David G. Victor and Linda Yueh

THE LAST decade has seen an extraordinary shift in expectations for the world energy system. After a long era of excess capacity, since 2001, prices for oil and most energy commodities have risen sharply and become more volatile. Easy-to-tap local fuel supplies have run short, forcing major energy consumers to depend on longer and seemingly more fragile supply chains. Prices have yo-yoed over the last 18 months: first reaching all-time highs, then dropping by two-thirds, and after that rising back up to surprisingly high levels given the continuing weakness of the global economy. The troubles extend far beyond oil. Governments in regions such as Europe worry about insecure supplies of natural gas. India, among others, is poised to depend heavily on coal imports in the coming decades. For these reasons, governments in nearly all the large consuming nations are now besieged by doubts about their energy security like at no time since the oil crises of the 1970s. Meanwhile, the biggest energy suppliers are questioning whether demand is certain enough to justify the big investments needed to develop new capacity. Producers and consumers, each group unsure of the other, cannot agree on how best to finance and manage a more secure energy system.

A crisis is looming, and it will be difficult to resolve because it will strike as two radically new changes are making it harder for

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governments to manage the world energy system. The first is a shift in the sources of consumption. The era of growing demand for oil and other fossil fuels in the industrialized countries is over; most of the future growth in demand will come from the emerging-market countries, notably China and India. The International Energy Agency (IEA) has projected that by 2030, China will depend on imports for at least two-thirds of its oil, and India, for even more. These countries, especially China, are choosing to secure their energy supplies less by relying on commercial interests—the standard approach for all the biggest industrial energy users over the last two decades—than by locking up supplies in direct bilateral deals with producing countries. For instance, China's push into Africa, Central Asia, and other energy-rich regions, which usually involves special government-to-government deals, is a rejection of the reigning market-based approach to energy security. And because oil, gas, and coal are global commodities, these exclusive, opaque deals make it harder for the markets to function smoothly, thus endangering the energy security of all nations. They also complicate efforts to hold energy suppliers accountable for protecting human rights, ensuring the rule of law, and promoting democracy.

The other big shift in the world energy system is growing concern about the environmental impact of energy use, especially emissions of carbon dioxide, an intrinsic byproduct of burning fossil fuels with conventional technology and the leading human cause of global warming. Worries about climate change are one reason why the major stimulus packages passed since the global financial crisis began in 2007 have included hefty green-energy measures: by some accounts, these have made up 15 percent of global fiscal stimulus spending. Some believe that such green-tinted stimulus measures will spur a revolution pushing for cleaner and more secure energy. Perhaps. But there is no doubt that energy systems are in for a major change. Curbing global warming will likely require cutting emissions of carbon dioxide and other greenhouse gases by more than half over the next few decades, and that goal cannot be achieved by just tinkering at the margins.

In the face of these new realities, the international and national institutions that were created to help promote energy security over the last three decades are struggling to remain relevant. The most important one, the IEA, has made little headway in involving the new giant energy

consumers in its decision-making. That means that it is struggling even to fulfill one of its hallmark functions—to stand ready to coordinate government responses to energy shocks—because a large, and growing, fraction of oil consumers fall outside its ambit and are wary of market-based approaches to energy security. Other institutions are doing no better. European states that depend on gas imported from Russia have signed a treaty and created an organization aimed at making those supplies more secure, but the practical effect of both steps has been nil. It was a good thing for the G-20 to announce a cut in energy subsidies at a summit in Pittsburgh last September—energy subsidies encourage excessive consumption, harming both energy security and the environment—but the G-20 has no plan for actually implementing that policy, and it has too many competing issues on its agenda. The big oil producers in OPEC have mobilized around the goal of promoting what they call “demand security,” but the cartel has no power to guarantee demand for its products. Likewise, the institutions charged with addressing new environmental challenges are barely effective: the Kyoto Protocol has had little impact on emissions, and the disputes that arose at the international climate conference in Copenhagen in December over how to craft a successor treaty are making it hard for investors to justify spending the massive capital needed for cleaner energy systems. Despite the existence of many international institutions attending to energy matters today, dangerous vacuums in governance have appeared.

The traditional solution of creating big new institutions, such as a world energy organization to replace the more exclusive IEA, will not work. What is needed instead is a mechanism for coordinating hard-nosed initiatives focused on delivering energy security and environmental protection. To be effective, those measures will have to advance the interests of the most important governments, of importers and exporters alike, and they will have to align with the needs of the private and state firms that provide most of the investment in energy infrastructure.

Producers and consumers, each group unsure of the other, cannot agree on how best to finance and manage a more secure energy system.

A model for these efforts exists in international economic law. Once saddled with too many institutions and too little governance, the world economic system developed a series of ad hoc arrangements during the last several decades that have evolved into an effective management system. Although the system is still imperfect, it now governs most international trade and a growing proportion of finance and banking. The Financial Stability Board, which issues standards for judging the adequacy of banks' capitalization, is a particularly apt example of the system's success. Its so-called Basel standards, created after the Asian financial crisis of the late 1990s, have been highly effective: many countries and banks have adopted them on the understanding that it is in their interests to run well-governed financial sectors that conform to widely recognized criteria.

A similar Energy Stability Board could be created to help governments and existing international institutions better manage today's energy problems. It could work with the major new energy consumers, such as China, to set investment standards that both align with their interests and are consistent with the market rules that govern most trade in energy commodities and have worked well for some time now. It could also help the governments that are spending the most on green energy coordinate their efforts; without better governance, these green stimulus programs risk triggering trade wars and wasting vast sums of money. Following the example of economic law, success with these initiatives would undoubtedly help the existing energy institutions do a better job and could also spawn broader norms for governing energy security.

ECONOMIC MODELS

THE LAST three decades have not been kind to efforts to create international institutions. One bright spot has been international economic law, now a set of useful general principles that has grown from practical, bottom-up experience. Its most successful aspects have been rooted in national interests: when governments find it pragmatic to comply with their obligations, broader sets of legal principles and institutions designed to ensure compliance develop.

The most visible of these institutions is the World Trade Organization. The WTO consists not only of rules that promote global trade but

also of mechanisms to clarify existing trade rules and encourage the creation of new ones. The WTO's members, be they weak or strong, tend to comply even with inconvenient WTO rulings because they usually have a greater interest in the orderly functioning of the global trade system, which the WTO's rules buttress, than in promoting their narrow interests. Even the sore points of the day, such as the stalling of the Doha Round of international trade talks, are signs of the institution's relevance. The WTO has been so effective at creating useful trade rules that the remaining barriers—such as agricultural subsidies on the Doha agenda—are the ones that are nearly impossible to clear, and this is because of political hurdles in some of the most powerful WTO members.

Governments have also built international institutions to govern finance and investment. The Asian financial crisis of 1997–98 led to the creation of the Financial Stability Forum within the Bank for International Settlements in order to restore order in world banking. Despite a glut of global forums pretending to help, such as the G-8, there was no body that included all the key players. Notably, the Asian states were left out—precisely the countries that, despite strong economic fundamentals, were being destabilized by flows of speculative, short-term portfolio capital, which prevented them from setting credible exchange rates or managing their balance of payments and even threatened pivotal banks and firms with insolvency. The contagion quickly spread to Russia, Turkey, and Latin America, leading to the bailouts of various governments and even the large U.S. hedge fund Long-Term Capital Management. The creation of the Financial Stability Forum was a quick response to the crisis. It explicitly included members beyond the G-8 and relied on the Bank for International Settlements, a credible forum for gathering central bankers, to coordinate the world's increasingly interlinked markets. After these efforts proved successful, the Financial Stability Forum was reconstituted as the Financial Stability Board and expanded to include all members of the G-20.

The Financial Stability Board's greatest achievement has been the creation of the Basel standards to assess the adequacy of bank capitalization. These have been widely adopted in emerging economies. Their application in China, for example, has helped reassure both foreign investors, who were wary of mismanagement by local banks, and the Chinese government, which was wary of intrusion on its sovereignty.

And the benefits of adhering to transparent global standards were overwhelming: China launched a series of successful initial public offerings drawing foreign banks into investing widely in China's banking system. Today, these standards are honored throughout most of the world's banking system. Participants understand that since no country alone can regulate banking, it makes sense to entrust the Financial Stability Board with helping governments craft and implement sensible, workable guidelines that suit rich and poor nations alike. To be sure, the global financial crisis has exposed remaining governance problems. But the crisis would have been much worse if capital standards for banks had not been shored up and mechanisms for coordinating financial policy had not already existed.

One lesson from this experience is that any effort to coordinate global energy policy must include all the most powerful players. Yet today, the most visible institutions for governing energy do not do this. Efforts to expand the IEA have been hobbled by the requirement that the agency's members also belong to the Organization for Economic Cooperation and Development, or OECD. Thus, the 28-strong IEA includes many countries with small and shrinking energy needs but excludes emerging giant energy consumers, such as China and India. Partial solutions have been devised—granting various states observer status, conducting joint studies with the IEA's highly competent secretariat—but they have not resolved the fundamental problem: when the IEA coordinates responses to an energy crisis, important players with large oil stockpiles, which could be the most helpful, have no voice. The only comprehensive solution would be to rewrite the IEA's membership rules. But this idea is a nonstarter partly because it would mean turning the organization into an even bigger forum, and existing members fear that their power would be diluted, as happened to the members of the G-8 when the G-20 grew more important.

Another lesson to be drawn from the success of global economic governance is that cooperation must have broad appeal, beyond the most important players. Global trade talks have made the most progress when they have focused on actions, such as the reduction of tariffs, that have a big impact on trade, are rooted in mutual interests, and are easy to enforce. Such successes then set the stage for governments to extend existing trade rules to many more countries and to take on harder tasks,

such as building the WTO's dispute-resolution system. Similarly, the G-20's norms against tax havens have spread more widely following success in such states as Liechtenstein and Switzerland. Since the financial crisis broke, many governments have seen the benefit of curtailing tax havens, not least because these havens have supported a shadow banking system that is hard to govern. That awareness, along with pressure on a few holdouts, explains why the last two years have seen much more effective tax enforcement worldwide.

Applying these lessons to energy means realizing that no system will be effective unless it starts with the countries that matter most—the large consumers and the large producers—and serves their interests. Success will require both that those countries reap practical benefits from cooperation and that the rules be designed so that they can spread widely as their legitimacy increases.

THE IMPOTENT CROWD

THERE IS no shortage of institutions in today's energy markets; what is missing, however, is a practical strategy for setting effective norms to govern the global energy economy. The IEA plays an essential part, but it has had a hard time finding its voice. Although OPEC serves a special role for oil producers, it is not designed to take on broader functions. A promising dialogue between members of OPEC and members of the IEA, aimed partly at bringing more transparency to oil markets by providing data on oil production and trade, is under way through the ad hoc International Energy Forum, but so far this body has taken very few concrete actions. The International Atomic Energy Agency is tackling the difficult problem of nuclear proliferation with aplomb. Yet there is no path from success on that front to broader cooperation on distinct energy problems.

Beyond these specialized institutions is a landscape of wreckage. Europe's Energy Charter Treaty has had no practical impact on energy markets, despite its bold vision for integrating the energy systems of eastern and western Europe. One problem is that the treaty violates the first rule of effective institution building: it alienates the most important player. Russia, Europe's pivotal energy supplier, sees no benefit in subjecting itself to oversight by an intrusive Western institution and so has ensured the treaty's irrelevance.

The institutions working on climate change, including the UN Framework Convention on Climate Change, would do well just to survive going forward after the summit in Copenhagen last December. The G-8 has placed climate and energy issues high on its agenda nearly every year for the last decade, but it has not done much beyond issuing grand and often empty proclamations: it has announced a need to limit global warming to just a two-degree increase over the coming century, despite current trends that almost guarantee the planet will blow through that target. Although efforts to expand the G-8 to include the main developing countries (Brazil, China, India, Mexico, and South Africa)—including the creation of the G-8 + 5—are well intentioned, they have been pursued entirely on the G-8's terms, and the G-8 has failed to seriously engage those pivotal countries. The G-20, which played the pivotal role in crafting new financial regulations after the Asian financial crisis, seemed to be a promising forum for addressing energy and climate issues as well, but topics such as the global economic meltdown of 2008 have crowded them out at the top of the agenda. A special forum for the world's largest emitters of greenhouse gases, which met in London last October, offered the hope of a flexible setting for negotiating limits on emissions, but that effort has also stalled: its most recent meeting ended in no new agreements nor any other progress.

INVESTORS ABHOR A VACUUM

FIXING THESE problems should begin not with grand attempts to build still more institutions but with a practical focus on filling the most important governance vacuums in the world's energy system: those regarding how to promote investment to develop urgently needed supplies of today's main energy sources, oil and gas, and how to support the climate-friendly technologies that will transform the energy system over the next several decades.

The security of oil and gas supplies is in question not only because the existing supplies are depleting quickly but also because investors are wary of pouring money into finding new resources. The problem is not geology: technological innovation is more than amply offsetting the depletion of conventional fossil fuels. The problem lies in the massive economic and political risks inherent in new projects, particularly

those that supply energy across national borders and thus face a multitude of political uncertainties. Suppliers worry that there will not be enough demand to justify the investments, especially now that growing concerns about climate change have cast doubt on the future of fossil fuels without offering a clear alternative.

Creating the right incentives to supply oil and gas requires efforts on several fronts. But the area in which governance is both the weakest and the most important concerns China, the world's fastest-growing energy user, and its major energy suppliers in Africa, Central Asia, Latin America, and the Middle East. The grants, special loans, and infrastructure development projects that the Chinese government routinely offers to its resource-rich business partners have generated criticism in the West. That criticism, in turn, has fanned fears in China that the energy supplies essential to sustaining the Chinese economic miracle will be hard to obtain. So long as China and the West lock horns on this issue, it will be hard to convince China that its energy security, like that of the large Western energy consumers, is best ensured by transparent, well-functioning markets governed by effective international institutions, not opaque special deals.

Before they can engage China, the governments of the major Western countries will have to realize that the Chinese deals of today are neither exceptional nor necessarily bad. Throughout history, many of the biggest international energy supply projects stemmed from special agreements that tied financing to a particular customer who could guarantee demand over a predetermined period. When the Chinese bankroll the production of new energy resources—often at a cost that others are unwilling to bear—they are also bringing more supplies onto the global market, which generally benefits all consumers. As with banking, so with the global energy market: China, along with other states, has an interest in the existence of accepted and practical norms; when markets work smoothly, China's energy security improves. And China is learning that flows of new supplies will be more reliable if they come from countries with well-functioning governments; China's scramble for resources since the late 1990s has backfired in many places, including Sudan, which has become a political quagmire for Beijing rather than a reliable long-term supplier. The key task is for China, its major energy suppliers, and the other large players in the world energy

market to craft investment standards that align China's interest in securing steady energy supplies with Western norms of well-functioning markets and good governance. This effort could begin with the creation of new standards for the next wave of Chinese investments in countries where the oil sector is well managed, such as Angola; that would set an example for what could be done elsewhere in the future.

Support for new green technology is a second area regarding which a vacuum in governance has made it hard for governments to achieve their common interests. The energy sector is one of the most exciting technological frontiers today. This is partly because climate change is transforming what societies expect from energy supplies, but it is also, and most immediately, because of the role that governments hope investments in energy infrastructure will play in economic recovery. Over the past year, governments have talked a great deal about coordinating their efforts to revive economic activity worldwide. Yet for the most part, each state is making decisions on its own, even though the International Monetary Fund, among other international institutions, has argued that a better-coordinated effort would do more to boost the global economy.

The problem is most obvious regarding the "green" part of the \$2.5 trillion that is being spent globally to stimulate the world economy. The United States and China alone are spending \$1.5 trillion, including a large fraction on energy projects. South Korea has devoted 85 percent of its stimulus package to green investments, promoting energy efficiency and low-emissions power plants. The British government has set aside hundreds of millions of pounds to support research and development in green industries. Coordination is needed, however, because the market for green-energy technology is global; ideas promoted in one country can quickly spread to the rest of the world through the marketplace. For example, U.S. spending on renewable sources of energy can invigorate U.S., Chinese, and European firms that supply solar cells and wind turbines, boosting all three economies at the same time. And Chinese spending on new power grids can benefit the Western companies, as well as the Chinese ones, that develop the requisite technology.

Coordinating these green-technology programs offers the prospect of a viable new global industry in clean technology, at least in theory. In practice, however, such stimulus plans are prone to economic nationalism. The United States' program, for example, includes rules that

favor U.S. suppliers, and one of the results, to cite an ongoing example, is that a Chinese company trying to bring Chinese technology to a wind farm in Texas will find itself in a hostile investment climate. Yet a true energy revolution cannot happen if technologies are nationalized; indeed, all the best and most competitive energy technologies have been improved by global competition. One way to get coordination started would be to require the leading spenders on green technology—in decreasing order, the United States, the European Union, Japan, and China—to offer periodic assessments of how their own programs are working and where new efforts, including joint ones, are needed. And with the right forum for coordination in place, such early endeavors could eventually spread more widely.

ABOVEBOARD

EXISTING INSTITUTIONS cannot fill these vacuums. A small, nimble body is needed: an Energy Stability Board modeled after the Financial Stability Board in the banking sector. The Energy Stability Board could gather together the dozen biggest energy producers and users. For its administration, it might rely on the secretariat of the IEA—by far the most competent international energy institution at present—much like the Financial Stability Board drew on help from the Bank for International Settlements to catalyze cooperation in the global financial markets. At first, the Energy Stability Board's activities would need to be ad hoc so that other institutions, such as OPEC and one or more of the Asian security organizations, could easily join its efforts; it would need to be especially welcoming to China, India, and the other important countries, which have been left on the sidelines of energy governance systems so far. Although the list of needed efforts is long, a priority should be engaging China (and other large new energy consumers) in developing standards for overseas investments and in coordinating the green-energy investments that constitute a large proportion of many governments' economic stimulus programs. In both those cases, initiatives by a small number of states, all rooted in these states' national interests, could have a large practical impact.

A key test for the Energy Stability Board would be for it to prove its ability to engage businesses. Firms will not provide the trillions of

dollars needed to develop energy infrastructure in the coming decades without credible signals that governments are serious about instituting policies that will allow the private sector to cash in on such investments. One way to reassure these companies would be to allow them to cooperate with governments

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in performing some of the Energy Stability Board's tasks. For example, leading firms could formally assess governments' green stimulus programs and identify those areas in which governments need to coordinate more effectively. (Governments usually are not effective coordinators of leading-edge technologies on their own because they have neither the necessary knowledge nor the necessary control over investment.) The Energy Stability Board could also become a forum for privately owned firms to work with state-owned companies, which control access to most of

the world's oil and gas resources and a large fraction of the world's electric power grid, especially in developing countries. These national enterprises are pivotal in the world energy system yet have not been well integrated into international energy institutions.

Success at these steps would create the right conditions to bring about cooperation in other important areas. Governments have repeatedly failed to establish a multilateral agreement on investment to govern foreign investments of all types, largely because they have taken on too many diverse and contentious topics. A sharper focus on energy infrastructure is more likely to succeed. Another disappointment has been the failure of the world's leading governments to invest adequately in energy research and development. (Despite the world's growing energy problems, the proportion of global economic output devoted to energy research and development is lower today than it was in the early 1980s.) Just as the Financial Stability Board, after it had proved itself, was asked to take on new tasks, such as devising internationally acceptable rules for bankers' compensation in light of the global financial crisis, the Energy Stability Board could be asked to issue guidelines for how to handle research and development and other issues that are difficult to keep on the agenda of existing institutions

yet crucial to the long-term development of the energy system. The board could also help build support for important initiatives, such as the new U.S.- and Chinese-led efforts to build a more secure system for nuclear fuel.

Getting started will require leadership. Only the United States and China can play the part, given their dominant roles as the world's largest energy consumers. But although the two countries have long professed their common desire to cooperate on energy issues, they have struggled to do anything practical. Moreover, strictly one-on-one dealings cannot solve the world's most pressing energy problems; the United States and China cannot set the agenda entirely on their own. Working in tandem through the Energy Stability Board, however, would give their bilateral efforts more credibility with other important actors and with international institutions. The United States and China know that such cooperation would serve their interests. Beijing's current strategy of locking up energy supplies is not sustainable without strong norms to make these investments seem less toxic politically to other important countries, especially the key Western ones. Working through the Energy Stability Board would serve the United States' interests, too: Washington will achieve very little of what it wants to get done in the world of energy, such as a more effective scheme for cutting greenhouse gas emissions worldwide, without giving a prominent role to other major energy consumers and other potential technology suppliers. An effective mechanism for engaging China would also give the Obama administration the political cover it needs to pass national legislation on global warming. One of the biggest hurdles in doing so has been its inability to convince a skeptical American public that China, India, and other major developing countries are also willing to play useful roles.

Although energy commodities and technologies are traded globally, the system for governing the markets for these important goods is fragmented and increasingly impotent. As the experience with global financial and trade regulation shows, that need not be the case. Nor is it necessary to devise grand new institutions to fix the problem. A nimble energy agency focused on practical approaches to the new realities of the world energy market can fill the gaps. 🌐