

Ghana, China, and the Politics of Energy

Stephanie Rupp

Abstract: Since the discovery of the Jubilee oil field in the Gulf of Guinea in 2007, Ghana has emerged as an oil-rich nation and emerging exporter of high-quality crude oil. Simultaneously the energy supplies available to Ghanaian citizens in everyday life have become increasingly unreliable, marked by persistent rolling blackouts. This article seeks to understand the complex relationship that has developed between Ghana and China, to illuminate Ghanaian perspectives on their energy needs, and to investigate how energy has become entangled in national politics and bilateral relations between Ghana and China.

Résumé: Depuis la découverte du gisement de pétrole du “Jubilée” dans le golfe de Guinée en 2007, le Ghana se révèle être une nation riche en pétrole, et il devient un exportateur de pétrole non raffiné de haute qualité. En même temps, les ressources d’énergie disponibles au quotidien pour les citoyens ghanéens deviennent de moins en moins fiables, le système de distribution étant affecté par des périodes régulières de black-out. Cet article cherche à comprendre la relation complexe qui s’est développée entre le Ghana et la Chine, pour illustrer les perspectives Ghanéennes sur ses besoins d’énergie et pour examiner comment les ressources énergétiques sont enchevêtrées dans la politique nationale et les relations bilatérales entre le Ghana et la Chine.

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Introduction

Since the discovery and development of the Jubilee oil field in the Gulf of Guinea in 2007, Ghana has emerged as an oil-rich nation and a leading exporter of high-quality crude oil. At the same time, the energy supplies available to Ghanaian citizens in everyday life have become more and more unreliable, with the rolling blackouts that intensified in 2004 continuing into the present. In addition, as Ghanaian energy politics have become increasingly contradictory—with a newly oil-rich nation struggling to provide basic energy resources to its citizens—the emergence of China as a global player has made the situation even more complex. On the one hand, China has stepped forward to provide technical expertise and funding for the development of energy infrastructure within Ghana; on the other hand, China has emerged as an international competitor for Ghana's oil resources. This article seeks to understand the complex relationship that has developed between Ghana and China and also to illuminate Ghanaian perspectives on their own energy needs: to investigate how energy has become entangled in national politics and bilateral relations between Ghana and China, and to examine the role it plays in the lives of individuals and communities. Borrowing a metaphor from competitive sports, I argue that the politics of energy in Ghana can be thought of as a powerplay: an attempt to access, control, or manipulate power to enhance one's strategic position and gain a competitive advantage.¹

This article is based partly on ethnographic fieldwork carried out in Ghana during the summer of 2009. In homes and offices in diverse neighborhoods throughout Accra, in students' shared accommodations and cybercafes, in shops in Accra and Koforidua, and in homes and gardens in small towns such as Kwahu on the edge of Lake Volta and Mampong north of Kumasi, Ghanaians talked about the politics of "energy" at multiple levels (individual, communal, national, and international) and in various contexts: as a metaphor for individual agency; as a material resource (such as electricity or oil) that fuels machines and technologies; and as a commodity that enables Ghana to develop as an economically independent, self-sufficient, oil-exporting nation.² At each of these levels, the physical realities and metaphorical meanings of energy are intermingled with Ghanaians' perceptions of power: the concrete, physical power supplied by utility companies; the ability of people to achieve their individual or communal objectives; and their dominion or sense of control over resources, processes, or people. In these conversations, therefore, energy and power emerged as tightly intertwined, though not always interchangeable, ideas. Significantly, the entanglements between energy and power highlighted Ghanaians' suspicions about the opaque nature of political power. They seek access to power in terms of the concrete materiality of electricity and petrol, in terms of individual agency and self-determination, and in terms of equality of access to national resources. In Ghanaian cities and towns, the provisioning of such everyday sources of energy is notoriously unreliable,

leaving individuals to scramble as they perform daily tasks and work to accomplish personal and professional goals. At the same time, they expressed concern that the politics of energy are occluded—invisible, hidden, or concealed. The technical means of generating and distributing energy are impenetrable to many Ghanaians; the political relationships that control energy resources within the nation are opaque; and the role of international powers such as China in both providing access to energy infrastructure and competing for energy resources appears inscrutable.³ Ghanaians expressed a great deal of frustration about this paradoxical situation: they have no power over power, and yet power—in its multiple senses—is central to their autonomy and independence, their basic ability to do work.

In the first section, “Energy Contexts,” the article introduces the issue of energy in the contexts of Africa and Ghana, particularly emphasizing the link between energy availability and the potential for socioeconomic development. The second section, “Energy and the Individual in Ghana,” takes a detailed look at issues of energy availability in Ghana at the level of the individual, and as individual groups are organized within Ghana in relation to energy. The third section, “Politics of Power,” examines issues of energy supply and energy resources at the level of national politics in Ghana, addressing the relationship between power in the physical sense of electricity and petrol, and power in the political arena. This section also examines the dramatically changed focus and scope of energy in Ghana as a result of the discovery of significant reserves of oil in the Jubilee oil field in 2007. The fourth section, “Ghana, China, and the Politics of Energy,” examines China’s engagements in Ghana’s energy sector. This section analyzes China’s development of the energy infrastructure as well as its keen interest in accessing Ghana’s energy resources, focusing in particular on Ghanaian perspectives on Chinese engagements. The article argues that in all of these contexts and at each level, Ghanaians experience power as a force that is indispensable to their individual agency, yet is opaque, occluded, and uncontrollable.

Energy Contexts

Electrical Ironies: Continent in the Dark

Seen from space at night, the continent of Africa flickers with light at the southern tip (South Africa) and northern edge (along the Mediterranean coast) and in small patches where electricity lights up major cities, and in the Niger Delta where gas flares at oil installations.⁴ Other than these flecks of light, the vast majority of the continent is enveloped in darkness. Because most sub-Saharan Africans lack access to reliable electricity, they by necessity forego many the benefits of modern technology, ranging from computers to simple electrical devices and lighting. Although the population of Africa, at nearly one billion, represents roughly 15 percent of the world’s inhabitants, the continent generates only 4 percent of the world’s electricity, 75 percent of which is consumed primarily by South Africa and Egypt

(*The Economist* 2007). The cost of electricity in Africa is also relatively high, averaging \$0.13 per kilowatt-hour (compared with \$0.03–\$0.08 per kilowatt-hour in most developed countries) (World Bank 2008). In addition, much of the electricity that is generated is lost in transmission; in Ghana, 25 percent becomes dissipated along inefficient transmission lines (Simons, Bentil, and Cudjoe 2009). Unreliable electricity imposes a tremendous economic burden on manufacturing: on average, African companies lose fifty-six days of productivity each year because of energy disruptions. The high cost and poor reliability of electricity throughout much of the continent results in estimated economic losses to the GDPs of African countries that average 2.1 percent per year (World Bank 2008).

Many efforts to provide a reliable electricity infrastructure in Africa have faltered and even failed. The foundations of the current infrastructure were built during the colonial era and early years of independence. However, in many African nations maintenance and extension of these systems did not keep pace with increasingly heavy usage as urban populations swelled throughout the second half of the twentieth century. In some cases, electricity infrastructure was dismantled to provide machinery and parts for other purposes, or it was poorly maintained and then abandoned once it no longer functioned.

Energy analysts project that the most salient distinction in terms of global socioeconomic advancement in the twenty-first century will hinge on power supply; nations whose economies are based on a solid foundation of power generation will advance socioeconomically, whereas nations that are hindered by an inadequate provision of energy to their citizens will fail to advance. Lack of access to electricity is increasingly recognized as a key indicator of overall poverty (see International Energy Agency 2004; Mandil 2005). Ironically, at the same time that people throughout the developing world lack access to electricity, lighting derived from alternative fuels costs the “energy poor” in Africa an estimated \$17 billion each year (World Bank 2008).

Ghana: Lights On, Lights Off

Unreliable access to electricity is nothing new to many Africans living south of the Sahara. Power shortages and rolling blackouts are a consistent if unwelcome feature of daily life, even in major African cities. And absence of electricity is also widespread throughout rural regions of the continent, including Ghana. Although Ghana shines as an example of economic growth and political stability in sub-Saharan Africa, its continued growth has strained facilities that generate, transmit, and distribute electricity. During the 1990s, industrial, commercial, and residential consumption of electricity increased between 10 and 15 percent per year without parallel increases in electricity generation. The nation’s consumption of electricity outstripped supply by the mid-1990s as a result of the increase in consumption of electricity and the ambitious National Electrification Program, which aimed to bring electricity to rural communities (“Guide to Electric Power in Ghana” 2005).

“Energy crises,” as Ghanaians refer to the pattern of energy shortfalls in their nation, have continued in waves throughout the first decade of the twenty-first century. El Niño weather patterns produced a severe drought in Ghana in 1999 and 2000, and Lake Volta—the enormous lake that engulfed thousands of square miles of land when the Akosombo Hydroelectric Dam was built on the Volta River in 1968—shriveled to half its original surface area. As a result of the diminished hydroelectric capacity of the dam, electric power output in the nation decreased by over 50 percent; the government instituted drastic policies of load shedding and tariff increases, and installed costly diesel generators in an attempt to maintain access to electricity. Industries—cocoa, mining, aluminum smelting—endured punishing economic losses as production and processing stalled (*Financial Times* 2011). Ghanaians became familiar with the pattern of low energy availability, high energy prices, and strident political accusations that would continue for much of the next decade. (See map below.⁵)



Map of Ghana

Recent events in the long history of energy shortages resulted from the intersection of another period of sustained dry weather and global spikes in the price of oil. During 2006–8, water levels in the Volta River again dropped below the levels required for adequate functioning of the hydroelectric turbines at the Akosombo Dam. As a result, hydroelectricity decreased from 74 percent of Ghana's national energy supply in 2004 to 53 percent in 2008. To supplement power generation from hydroelectric plants, Ghana has also imported slightly more than 15 million barrels of oil per year to fuel thermal power plants. However, the rise in crude oil prices during the first decade of the twenty-first century—at a time when Ghana did not have available sources of domestic oil—meant that Ghana became even less energy sufficient. During 2001, the first year of recent, intensive energy crises, oil imports composed 80 percent of the annual national trade deficit. Between 2000 and 2004—*before* the global spike in oil prices—the annual cost of importing crude oil rose from \$280 million to \$500 million. By 2004, over three-quarters of the nation's debt underwrote the investments and operating costs of the Volta River Authority, the struggling entity that manages Ghana's electricity generation (Simons, Bentil, & Cudjoe 2009). Between 2004 and 2008, the international price of crude oil surged from just over \$30 per barrel in February of 2004 to nearly \$133 per barrel in July of 2008, making the generation of electricity through oil-dependent thermal plants and diesel generators prohibitively expensive (Energy Information Agency 2012).

This combination of low rainfall and high international prices of oil resulted in a combustible mix of factors for Ghana's energy sector. Rolling blackouts took place throughout Ghana during the last months of 2006 and continued unabated through September 2007. Ghanaian companies that rely on electricity for manufacturing output were forced to halt production or to invest in costly back-up generators. Because of the prolonged drought, public health issues such as malnutrition and diarrhea increased during 2006–8, at the same time that health services declined to a critical state of operation. Lacking reliable sources of electricity, hospitals and medical centers could not ensure adequate lighting, refrigeration of medications, and operation of medical instruments. Hospitals throughout Ghana lost major investments in essential medical equipment such as CT scan and ultrasound machines, which were destroyed by surges of electricity. As a result of the irregularities in energy supply, water treatment and processing plants experienced difficulties supplying urban consumers with basic services such as providing potable water (*Ghanaian Chronicle* 2009). Despite official reassurances that the energy sector had been reformed to cope with seasonal fluctuations in water levels, high prices of crude on the international market, and increased national demand, the energy crisis escalated again in early 2008, an election year, bringing Ghana's energy issues to a new level of national acrimony.

Energy and the Individual in Ghana

While Ghana's ongoing energy predicament is perplexing at the national level, the unreliability of energy systems creates costly losses to institutions and companies throughout the nation and establishes patterns of frustration and disillusionment in the lives of individual Ghanaians. During the energy crisis that extended from 2006 through 2009, residents in Ghana's main cities typically endured several blackouts per day as well as shortages of petrol for both vehicles and domestic food preparation. A twenty-five-year-old engineer complained,

No one can rely on constant supply of energy, even for one day. Not even on a Sunday morning! In two months, we had power outages on five Sunday mornings at around 9:35 or 10:00 sustained until around 1:40 p.m. We face indiscriminate power outages every day. The power goes off and on more than four times in a day. In fact, no one can be assured of uninterrupted supply of electricity in a day.

Affluent, urban Ghanaians interviewed in Accra described with frustration that their electronic devices, from computers to phones, were ruined by unpredictable, recurrent power fluctuations. Not only electricity, but also petrol (gasoline) and liquid petroleum gas (LPG: stored in cylinders and used for cooking) were in short supply. Long lines formed at petrol filling stations, and Ghanaians suspected petrol companies of hoarding supplies. Urban Ghanaians found daily life becoming increasingly unpredictable, complicated, and frustrating. "Life is worrisome, particularly in the nights," said a fifty-six-year-old administrator from Koforidua. "Also cooking becomes difficult and burdensome." City residents took to cooking their daily meals outside, using "indigenous" forms of cooking fuel and lighting such as charcoal and candles, energy forms utilized commonly in rural regions of the nation, instead of LPG and electricity. In Accra, disruptions of electricity were seen as more than inconvenient; they posed challenges to individuals' ability to function effectively for reasons as mundane and frustrating as not being able to iron a uniform. According to a thirty-year-old teacher,

Everything comes to a halt. Take ironing. Sometimes you have to be proactive, because you have to iron your things. When you can't iron your uniform for a week, you have to do something. Maybe you can find an iron that can use charcoal. It just makes life more difficult. So basically it [energy unreliability] just brings everything to a halt.

A forty-eight-year-old public servant who lives in the Galloway neighborhood of Accra summarized his experiences with "lights-offs" (as blackouts are colloquially known) in succinct exasperation: "Lights-off unannounced—very frustrating."

In the most general sense, the energy disruptions were associated with an inability to work—to perform one's job, or just to function on a daily basis. When asked the question "What is energy to you?", many individuals referred to energy as "the ability to do work."⁶ They spoke variously, however, of energy as an internal force that allows them to perform their daily activities, and energy as an external product or service that allows technology and commerce to flourish. A forty-one-year-old male teacher from Koforidua equated energy with personal vigor and physical well-being: "Energy is like to my heart and body." A thirty-year-old farmer in Mampong, eastern Ghana, expressed her notion of energy as embodied in individual labor: "In human beings there is energy too, to work the cutlass, the hoe." By contrast, a fifty-six-year-old male office administrator provided a more literal definition: "Energy is the source of fuel and light and power." Speaking perhaps from both perspectives, a twenty-five-year-old male engineer said "Energy is a friend to me." But while energy figures in diverse spheres of life, from individual bodies to physics, technology, and business (an "essential commodity" that serves as the "lifewire of business"), energy in all cases was described as an invisible force that "propels" systems, both "domestic and commercial," and "sets things in motion." In short, energy "resourcitates," according to a fifty-six-year-old clergyman's neologism. In perhaps the most general sense, energy was equated with power, although here too the answers ranged from the specific to the general. Several university students answered the question with statements such as "Energy is anything that generates power"; "Energy is the source of power"; "Energy is the ability of power"; "Energy is power." Especially in the last answer energy was equated not only with the capacity to do work, but also with the capacity to exercise personal agency: energy as both a metaphor for and an agent of individual capability.

Indeed, energy shortages and blackouts highlight differences in power at individual and community levels, revealing disjunctures in socio-economic status as well as geographical differences among Ghanaians. The lack of equal access to electricity was a resounding refrain in the comments of respondents from various educational, class, and geographical contexts. Within cities, differences in geography are correlated not only with differences in socioeconomic standing, but also in access to electricity. Neighborhoods of Accra that house affluent, educated, and politically connected individuals experience a relatively reliable access to electricity, while poorer neighborhoods—especially the unplanned urban areas that have sprung up as a result of internal migrations from the countryside to the cities—do not. "Energy is not supplied equally" in neighborhoods of Accra, said a twenty-five-year-old engineering technician. "Areas like East Legon and the like are supplied with constant energy, and announcement is made prior to any power outage. Areas like Kasoa, Nima and the like are not." East Legon comprises landed estates of wealthy and politically connected Ghanaian families, while Kasoa and Nima are unplanned neighborhoods of recent migrants to the city. Ghanaians also anticipate a decline

in electricity as one moves from cities to smaller towns, to villages, and finally to “thick” villages located in remote, rural areas. “Energy is not supplied equally throughout the nation; rich and urban communities have it, and the poor and rural don’t,” said the clergyman quoted above. According to two male university students, electricity is an “entitlement” of the “well-endowed.”

Paradoxically, however, while access to electricity is diminished as one moves from cities to remote regions, access to local sources of energy *increases* in the rural areas, thereby supporting individual agency in at least this sense. As one resident of Accra noted, “urban dwellers have more access to electricity than rural folks, but rural people have better access to indigenous forms of energy like charcoal....” Indeed, in rural regions of eastern Ghana, people pointed to the availability of charcoal and firewood as one of the conditions of stability for their families. “We go to the farm where we clear trees, and then we let the wood dry, said a thirty-year-old female farmer in Mampong, eastern Ghana. “We bring it back home to use as firewood, and to make charcoal.... In terms of charcoal and firewood, it [energy] is free.” A fifty-year-old woman from Nkawkaw, a town along the road between Accra and Kumasi, who makes her living as a baker and relies on firewood to fuel her *frono*, or clay oven, spoke of those who rely on electricity as particularly vulnerable: “If there’s a blackout, it’s the coastals whose products spoil. People stop working.” (*Coastal* is the term for people who sell fresh meat and fish and therefore rely on electricity to refrigerate their products.) Thus in the poorer areas of cities and in rural towns where electricity is unreliable, Ghanaians who are dependent on institutionally generated power may experience more threats to their livelihoods than people who utilize no electricity at all and rely instead on local sources of fuel.

Nevertheless, for most respondents, electricity is a basic necessity, and lack of access to adequate electricity is both a symptom and a determinant of individual powerlessness. Rural Ghanaians, too, spoke of the constraints that individuals face in their own progress as a result of unreliable energy. The baker in Nkawkaw expressed the opinion that “students in cities perform better [than students in villages] because they have access to extra classes and activities at night, and extra study time at night, because they have electricity. But here in the village, students can’t study at night.” Some urban respondents speculated about high-tech alternative sources of energy, such as the possibility of utilizing individually operated solar panels to control their own electrical supply. A twenty-eight-year-old male graduate of the University of Ghana said

I think that maybe solar would be a lot better than electricity. For then you are in control of your energy. You can decide to use it or not. But with electricity, they can just take it out any time they want. Your life may just come to a halt, and you plan to do something and are on the way, and then they take out your light.... You pay [for energy] but you may not get... [it]. You could have used that money for something else. If you have solar, you

are in control of it and you also know how to use it because you know what it cost you to get it and use it.

Thus, in the perceptions of Ghanaians from the capital city to the countryside, energy independence at the individual level may be the best way to ensure one's agency, the ability to realize one's goals.

For the most part, however, Ghanaians spoke about the provisioning of energy as beyond their control, and even beyond their understanding. Both the Electric Company of Ghana (ECG) and the Volta River Authority (VRA) are state-sponsored entities that deliver energy; the VRA is responsible for the generation of electricity from Volta River hydroelectric plants, and the ECG is responsible for the transmission and distribution of energy throughout the nation. But when asked who (or what institution) is responsible for ensuring the adequate supply and delivery of energy, respondents tended to indicate vaguely that "government" or the "Electric Company of Ghana" is responsible. Confusion about who has power over power deepened when respondents attempted to identify which Ghanaian ministries are responsible for energy. While many respondents (correctly) identified the "Ministry of Energy," others identified other ministries—some of which do not exist—including the Ministry of Energy and Mines, the Ministry of Energy and Manpower, and the Ministry of Energy and Power. (These alternative names, while incorrect, seemed to highlight imaginative connections between energy and other notions of power: minerals, manpower, and raw power). Several individual responses named other entities as responsible for power: the Public Utilities Regulation Commission; Tema, a thermal-fired power plant on the southeastern coast of Ghana; transmitting stations; and the private sector. Taken as a whole, these responses highlighted the multiple registers at which the notion of power is understood, as well as the obscure structure of the political power that controls physical power.

Politics of Power

Energy and Politics in Ghana

Energy failures highlight interconnections that Ghanaians perceive between electrical power and political power at the national level; their frustration with the lack of reliable power in the form of electricity mirrors their sense of disenchantment with power in the political sphere. The currents of electricity mirror the flow of economic and political power: electricity flows uninterrupted where wealth and political influence prevail. "People who are ministers and government officials have electric running for them," said the baker from Nkawkaw. "Ordinary people have constant blackouts. If you have political power, you have electricity." Power begets power, and the connection between physical power and political power is causal as well as metaphorical.

During the contentious election season of 2008, Ghana's energy crisis was a prominent campaign issue. Ghanaian voters correlated their right to vote with the right to receive a continuous, reliable supply of energy; they sought to establish energy as a national right of each citizen, rather than as an entitlement for those with economic and political power. And they considered the failure of the ruling party (the New Patriotic Party, or NPP) to provide a reliable supply of energy as a political failure. According to one respondent, the position of many voters was "No electricity, no vote"; another added that some urban poor and rural communities "demand...to be wired before they [will] exercise their franchise." In response to the popular agitation for improvement in energy infrastructure for the provisioning of both electricity and petrol, politicians highlighted energy policy as a key element of their campaigns. The NDC (National Democratic Congress, the party headed at the time by John Atta Mills), which eventually prevailed in the elections by a slim majority, made energy a central plank of its campaign platform. As one young man from Koforidua recalled, "the NDC people claimed that when they come to power, they will make sure that the shortage of power will be eliminated, and that the prices of energy will be reduced." A thirty-year-old female teacher from Koforidua said that "our rural areas were promised electric power, and urban cities were also promised subsidies on all energy-related products." Nevertheless, many Ghanaians remained skeptical about the chances of actually experiencing an improvement in the energy infrastructure. In Kokromante, a remote village that is tenuously connected to the rest of the nation by a roughly hewn, unpaved, and unmaintained road, politicians promised to "bring solar" to provide villagers with electricity for the first time. A fifty-five-year-old woman who makes her living from small-scale farming and relies on charcoal and kerosene for her energy supply commented, "They promised solar. They promised lights. But then after the vote they forgot that our village even exists." This persistent pattern of power failure—both failure of political leadership and failure of the electrical supply—leads Ghanaians to perceive the political process as manipulative and murky, operating not on behalf of the average citizens but for the advancement of those who already hold power.

Jubilee: Toward Ghanaian Energy Independence?

For people throughout Ghana, the discovery of oil in 2007 off Ghana's Atlantic coast raised a spirit of national ebullience, pride, and hope for economic independence. After decades of unsuccessful prospecting for petroleum resources in Ghana, an Irish exploration company, Tullow Oil, located a deep and plentiful reservoir of high quality, sweet crude oil; indeed, this reservoir of oil is considered to be one of the most significant discoveries of petroleum in the past two decades throughout the Gulf of Guinea. Ghana's political leaders sought to project a new national identity: Ghana was emerging as a self-sufficient, energy independent, prosperous country whose natural wealth would launch a new era of

national stability and growth. The discovery of oil coincided with Ghana's celebration of its first half-century of independence. Just as political independence from Great Britain marked a watershed in political independence, Ghanaians hoped that the discovery of such an abundance of oil resources would mark a watershed in Ghana's economic independence. Symbolizing this parallelism, Ghana's politicians christened the oil "Jubilee," stamping the notion of Ghanaian independence and rising power onto oil barrels and stock market boards, and into the imaginations of global energy consumers.

The new-found oil wealth, coupled with political stability of Ghana—including the elections of 2008 in which power was transferred smoothly from the NPP to the NDC despite the narrow margin of electoral difference—inspired bilateral partners to redouble their efforts to engage Ghana. President Obama's first state visit to the African continent was a visit to Ghana in 2009, sending a strong signal that the U.S. is eager to embrace African partners who take democracy seriously, and also that it recognizes Ghana's rising fortunes. At the same time, China has been ramping up its investments in Ghana, even as it increasingly hesitates to invest further in African nations—including oil-rich nations—whose political systems are notable for their lack of democracy and transparency.⁷ From China's point of view, the discovery of deep-water oil fields in Ghanaian waters provides direct impetus for investing in Ghana, while the background of political and economic stability of Ghana offers a firm foundation for their efforts to secure access to energy resources.

The discovery and development of Ghana's offshore Jubilee oil field represents an enormous opportunity for Ghana's national development, which previously relied on gold and cocoa as primary export commodities. The Jubilee oil field includes seventeen wells straddling two licensing blocks, West Cape Three Points and Deepwater Tano, with an estimated combined production capacity of 1.8 to 3 billion barrels. First oil flowed in an opening ceremony on December 15, 2010. The inaugural commercial lifting of oil took place in January 2011 in an elaborately staged ceremony presided over by Ghana's president, John Atta Mills, as well as his two predecessors. Revenue predictions of \$20 billion in the first twenty years of production have sent Ghanaian politicians, business leaders, and citizens into a flurry of excitement, as the nation perceives itself on the threshold of take-off.⁸ Symbolically reinforcing Ghana's push toward a new era of independence—energy independence—the Floating Production Storage and Offloading unit (FPSO), the massive vessel that receives the oil from the ocean's depths and transfers it to containment vessels, has been named the FPSO "Kwame Nkrumah."⁹ In September 2010, even before the first lifting of Jubilee oil had taken place, another prospecting company, Kosmos, struck oil again in an adjacent field called Owo, with reserves estimated to match or even surpass those at Jubilee. Then in March 2011 Kosmos struck oil in five reservoirs in another field adjoining Jubilee. And in June 2011 both Kosmos and Hess Oil announced separate discoveries of oil in the vicinity.

In the frenzy of oil discoveries, Ghanaian leaders were deadlocked in indecision regarding how best to utilize proceeds from oil. The Petroleum Revenue Management Act, the legal blueprint outlining how Ghana's oil wealth would be managed, was not passed until after the first commercial lifting and sale of oil had already taken place. The leading issue of contention concerned whether and how Ghana should collateralize loans using its new oil wealth. In other words, should Ghana use predictions of its future oil wealth to secure loans from overseas partners—in particular from China—to invest in the basic infrastructure, including electricity generation, distribution, and transmission facilities, that the nation sorely needs?

Despite the rush of speculation in Ghana and abroad about the potential of Jubilee oil to lift Ghana to a new level of national development, many Ghanaian observers expressed skepticism that revenues from the nascent oil industry would benefit Ghanaian citizens. In the popular press, some Ghanaians expressed enthusiasm about this windfall of oil resources while others voiced frustration with the elusive nature of the claims and urged caution about the very slippery potential of oil revenues to slide silently into the deep pockets of vested interests rather than to trickle down to ordinary people. Three sequential comments to a 2010 article titled “Another Major Oil Find Off Ghana” in an online journal that is widely read among diasporic Ghanaians highlight this anxiety.

Kpeseh: “OIL HERE, OIL THERE, OIL EVERYWHERE. We want physical proof not mere words.”

Virginia Etwe Toto: “Show me the money, not the oil.”

Safo Kantanka: “Let the Chinese come take this one, too.”¹⁰

Observers argued that Ghana's wealth in gold and cocoa had not materialized as wealth for Ghana's citizens, so why should oil make them rich? “Ghana with oil, gold, diamond, timber and bauxite can't even have twenty-four hours of electricity, build schools and roads and feed her people,” said another online commentator.¹¹ The twenty-eight-year-old university graduate quoted above also articulated his sense of the contradiction between the presence of valuable natural resources in Ghana and the absence of sustained national development.

We have oil, and it's going to benefit us. Which I truly don't believe. Hold on a minute! What's going on? Now gold is at its highest prices as a commodity on the international market. And we've been digging gold. And you see how it has destroyed our people. You cannot use gold to develop your country. So how can you use oil to develop your country?

Meanwhile, as Ghanaians watched warily for signs that the oil resources might not benefit citizens, the discovery of oil added fuel to the ongoing criticism of the culture of corruption in Ghanaian politics. As one Ghanaian virtually shouted through cyberspace:

KOSMOS CAN FIND ALL THE OIL IN THE WORLD IN GHANA. AFTER THE CROOKS, THIEVES, THUGS, LIARS, CRIMINALS...IN GHANA GET THEIR HANDS ON THE OIL REVENUES IT WILL NOT BENEFIT THE AVERAGE GHANAIS. THESE THIEVES ARE SALIVATING LIKE DOGS FOR THE OIL-MONEY.¹²

The gush of Jubilee oil thus raised messy, caustic arguments about the nature of power and politics in Ghana.

Just as the potential for wealth from oil catalyzed renewed public criticism about the murkiness and corruption of Ghanaian state politics, the jockeying for position among the partners in the Jubilee oil field highlighted the brackishness of oil politics. Various international companies own stakes in the Jubilee oil field, although the interrelationships among them have shifted periodically and negotiations remain opaque. The primary partners in Jubilee oil exploration, extraction, and development include Tullow Oil (36.45% share), Kosmos Energy and Anadarko Petroleum (each holding a 23.49% share), Sabre Oil & Gas (2.81% share), and the Ghana National Petroleum Corporation (GNPC, holding a 13.75% share).¹³ In 2010–11 controversy and competition over Kosmos Energy's share roiled discussions of the Jubilee field because Kosmos had entered into a private binding agreement to sell its share to ExxonMobil for \$4 billion. GNPC claimed right of first refusal in its capacity as the sovereign owner of the oil resource, but Kosmos held fast to its right to sell its property according to its own interests. The legal standing of the Kosmos–ExxonMobil deal remained obscure, in part because the arrangements between the companies had been negotiated in back-room deals and in part because the Ghanaian state had not finalized the Petroleum Revenue Management Act and therefore did not have a legally valid mandate for the management of oil resources at Jubilee.

Meanwhile, other contenders jumped into the fray, attempting to persuade the government of Ghana to enter into partnerships to bid for the Kosmos stake. In addition to several major oil companies such as British Petroleum, Chevron, and Shell, petroleum companies from India and China bid for the shares. Most prominently, the Chinese National Offshore Oil Corporation (CNOOC) emerged as the leading contender to partner with GNPC to buy out the Kosmos share, offering Ghana \$5 billion in a cash settlement in addition to \$2 billion in concessionary loans. Although the GNPC/CNOOC partnership offered Kosmos \$5 billion to secure its share, exceeding ExxonMobil's offer by \$1 billion, Kosmos, to the disbelief of many Ghanaian observers, rejected the bid and opted to raise funds to continue its own exploration and development of oil resources in the Gulf of Guinea. On May 9, 2011, Kosmos began trading as KOS on the New York Stock Exchange, raising \$594 million.¹⁴ Nevertheless, the interest shown by the Ghanaian government in partnering with CNOOC bodes well for the future of Chinese energy interests, and fits China's pattern of seeking to secure access to oil resources by outbidding competitors and offering generous bilateral loan packages.

At the same time, however, the wheeling and dealing among political players and economic interests underscore the opaque relations of the energy industry and political lobby, highlighting the lack of control that Ghanaian people have over energy resources as national patrimony or as reliable power in their own lives. Jubilee oil thus brings into focus the connections among registers of power in its three capacities and at three levels, simultaneously. At the level of the individual, Jubilee oil represents the potential for Ghanaians to access affordable, constant energy as a practical, physical force in their everyday lives, increasing people's abilities to accomplish their goals and extending their individual control over the contexts of their lives. At the level of the nation, Jubilee oil offers increased scope for economic development and national stability, providing increased security and control as long as Ghana retains sufficient control over its oil resources. At the international level, Jubilee oil offers unusual opportunities for profit to international companies and exceptional opportunities to build bilateral ties and to secure access to high-quality energy sources for Ghana and its partners, including China. In its capacities as physical force, ability, and control, the power afforded by Jubilee oil resources highlights the elevation of hopes, the opacity of negotiations, and the tensions involved in the politics of energy at individual, national, and international levels.

Ghana, China, and the Politics of Energy

China's Quest for African Energy Resources

Since the mid-1990s, China has increasingly turned to African nations to supply its oil-thirsty industries.¹⁵ In the face of the stark realities of the energy poverty of many ordinary Africans, China's quest to secure access to African energy resources and the willingness of African states to sell energy resources abroad appear to many to frustrate local needs. However, as the scramble for stakes in Ghana's Jubilee oil field makes clear, China is only one competitor in the already hectic and complex market for African energy resources. As a number of scholars have emphasized, although China has moved aggressively to secure access to energy resources, its search for oil fits within the context of the ruthlessly competitive international energy market (Soares de Oliveira 2008:84).

Yet two fundamental differences set China's energy policy apart from the approaches of other, mostly Euro-American, oil interests in Africa. First, China seeks to establish preferential bilateral ties with African oil-producing nations. Second, China does not rely on private, commercial interests to access energy resources, instead making use of state-owned enterprises to procure oil and oil products. As a result, Chinese state-owned oil companies merge economic and political interests; China courts oil-producing states by offering attractive financial terms for oil projects, extending soft loans, and providing development initiatives.¹⁶ In the energy sector, China seeks to secure access to African energy resources, offering its technical expertise

and economic clout to (re)build energy infrastructure as part of its overall bargaining. Because of the highly complex and often uncoordinated nature of Chinese policies, agencies, and negotiations, it would be misleading to argue that China proposes tidy arrangements in which it swaps energy infrastructure for energy resources. However, China certainly recognizes the dire need for infrastructure in many African nations, its own ability to fill this gap, and its competitive advantage over Euro-American oil majors that do not count infrastructure development as part of their corporate enterprise. A Chinese delegation that visited Ghana in February 2012 was explicit about its interest in “mutually beneficial arrangements” that would link Chinese investment in energy infrastructure with Chinese engagement in Ghana’s petroleum sector (*Ghana Business News* 2012; Government of Ghana 2012). China places African nations in the paradoxical position of leveraging raw energy resources such as oil for the infrastructure that they need in order to realize benefits from energy resources—such as electricity—at the national level. Thus, a bitter irony for many African observers is that China effectively provides energy-rich African nations with the means to ensure that their own electricity-poor citizens have access to usable forms of energy.

Ghana–China: Electricity In, Oil Out

Since the mid-1990s, China has actively been seeking access to energy resources across Africa while simultaneously extending generous grants and concessionary loans to support infrastructure development. Even before the discovery of Jubilee oil, China stepped forward to offer economic and technical assistance with many projects in Ghana, including electricity generation facilities, most notably in the construction of the Bui Dam in the northwestern region. The goal of the Bui Dam project is to bring electricity to rural communities that lie far beyond the reach of the national electrical grid. This project provides an opportunity for China simultaneously to showcase its expertise in hydroelectric technology and to enhance its partnership with the Ghanaian state.

The original plan to dam this segment of the Black Volta River was proposed in the 1920s by the British colonial government, but it was not developed. In the 1970s the Soviet Union reconsidered developing plans for a hydroelectric facility, followed by the French in the 1990s; neither nation undertook the project (MqVU 2009). In 2005 Ghana accepted the proposal for constructing the Bui Dam submitted by Sinohydro, one of the main firms that built the Three Gorges Dam in China. Loans extended by China for this project are backed by the provisioning of cocoa to China, supporting the expansion of China’s domestic markets for luxury foods and cosmetics (Kokutse 2008). The construction of the Bui Dam, which is scheduled to come online in the second quarter of 2013, provides employment for approximately three thousand Ghanaian workers.¹⁷ The project faces criticism, however, as the flooding of the Black Volta will inundate roughly

one-third of a national park and will displace as many as twenty-six hundred people (see International Rivers n.d.; Mohan 2010). Yet the allure of providing electricity to this region of Ghana, and the glittering promise of the development of “Bui City” as a commercial center that will be “like Dubai,” seem to outweigh the potential drawbacks of this major hydroelectric project (Boateng 2007). Ghanaians hunger for the infrastructure that will facilitate modernization, and celebrate new lines of finance from China and the prospect of new wealth through oil revenues.

Another example of China’s support of Ghanaian electrification infrastructure is the Sunon Asogli Kpone power plant, a private-sector project proposed by the chief of the Asogli State to ensure the energy security of his region along the southeastern Atlantic coast, near Tema. In 2006 Togbe Afede XIV, Agbogbomefia (chief) of Asogli state, traveled to China seeking support for the proposed 560-megawatt thermal power plant, and secured \$143 million in financing from the Shenzhen Energy Group. At the launch of the Sunon Asogli plant, the project was hailed by then-President Kufuor as exemplary of the spirit of public–private partnership that would advance the socioeconomic development of Ghana (Ghana News Agency 2008). The plant was also one of the first two projects supported by the China–Africa Development Fund (CAD) at its inception in 2007, signaling China’s interest in promoting the economic development of sectors that would enhance Chinese business opportunities and provide access in the future to critically important resources such as oil (Bräutigam 2009:94; *Daily Guide* 2008).¹⁸ The managing director of the plant, Haicheng Zhang, underscored the success of this venture, indicating that even with only the first phase of the plant completed—200 megawatts of the total 560 megawatts of electricity to be generated—the plant already had produced 15 percent of Ghana’s electricity during the year 2011 (*Daily Guide* 2012).

In response to a series of questions designed to gauge Ghanaians’ perspectives on China’s involvement in development efforts in Ghana in general and Chinese engagement in the development of the energy sector in particular, urban Ghanaian respondents offered practical perspectives. Accra participants tended to express pragmatism in considering China’s swelling involvement in Ghana’s development, accepting efforts that they perceived as involving little risk to Ghana. But they tended to view China’s engagement warily if Ghana’s national autonomy or future interests appeared to be at stake. Responses to the general question “What are China’s objectives in Ghana?” were generally balanced. A number of respondents expressed China’s role in Ghana as benefiting Ghana in a general sense of economic development; a resident of Koforidua said that “China’s objectives are to assist in the development of Ghana,” and a resident of Accra said that China wished “to help Ghana achieve middle-income status.” But another current of opinion was less sanguine in interpreting China’s objectives, suggesting that China’s development efforts in Ghana are aimed at garnering political allies as well as access to Ghanaian resources and markets. For example,

a twenty-seven-year-old librarian indicated that the Chinese “are looking for political allies and are interested in Ghana’s recent oil find.” Commenting on the rash of Chinese-financed, -managed, and -executed construction projects throughout Ghana, a twenty-five-year-old teacher remarked with suspicion that China’s objective is “to take over the construction industry in Ghana.” Still another set of responses suggested that both Ghana and China stand to benefit from the partnership, with each country ultimately putting its own national interests first. The fifty-six-year-old clergyman, for example, described China’s objectives in Ghana as helping “to...improve upon her [Ghana’s] energy problems while also having her [China’s] share of the cake.”

Another set of questions probed Ghanaians’ perceptions of China’s role in building and refurbishing energy infrastructure in particular. Significantly, on this topic most comments were positive. Only one response was laced with dissatisfaction: “The way China is going about the work is satisfactory, but their social responsibilities toward the local people is not the best,” said the thirty-year-old teacher from Koforidua. Nevertheless, the majority of urban Ghanaians with whom we spoke seemed to recognize the significance of China’s contribution to energy infrastructure: “The Chinese are playing a very major role in building energy infrastructure in Ghana,” said a twenty-seven-year-old male university student; “They are indeed helping Ghana to overcome its energy problems,” said the office administrator from Koforidua.

However, while Ghanaians recognize the positive impact of China’s work in improving energy infrastructure in Ghana, they also point out that China is not motivated by altruism. Two males in their twenties emphasized that China seeks a “win-win” outcome in its “partnership” with Ghana, and that Ghana should be vigilant to ensure transparency in negotiations and employment opportunities for Ghanaians. In responding to the question “Why is China interested in building up Ghana’s energy infrastructure?” only a small number of interviewees indicated that Chinese engagement in this area is intended to benefit Ghanaian interests alone; most replies indicated that Chinese engagement is either part of a mutually beneficial strategy or part of one intended to advance China only. For example, one businessman indicated that China is interested in building up Ghana’s energy infrastructure “so that Ghana can develop to meet China’s standards,” thereby “opening Ghana’s markets” further to Chinese commercial activity. Other responses highlighted the link between energy infrastructure and diplomatic relations; two men expressed the opinion that China is building up Ghana’s energy infrastructure “so that one day Ghana will support China if the need arises,” and “to oil the wheels of diplomatic relations.” Thus, while Ghanaians are clearly appreciative of China’s efforts to build up their energy systems, their perspectives reflect awareness—and concern—about the overarching political and economic consequences of China’s involvement in their nation.

Despite such concerns, bilateral relations between Ghana and China have continued to deepen. In September 2010, in the run-up to the commercial lifting of oil at Jubilee, China hosted Ghanaian President Mills in Beijing, where they negotiated state-to-state deals that surpassed agreements confirmed in previous China–Africa summits. China’s ExIm Bank pledged a \$10.4 billion funding package to support infrastructural development in Ghana, and a \$3 billion loan was extended by the China Development Bank to develop Ghana’s oil and gas sector (*China Daily* 2010; Bräutigam 2010). Bilateral trade between the nations had already reached \$1.6 billion in 2009, with the number of development projects undertaken by China exceeding four hundred. With fanfare that echoed their shared history of struggle for independence and nonalignment, Ghana and China proclaimed 2010 the “Golden Jubilee” of their partnership, celebrating the diplomatic relations that they had established in 1960 (*China Daily* 2001). Perhaps the Golden Jubilee partnership would come to satisfy China’s interest in Jubilee oil as well.

Just six months after China and Ghana announced the slate of bilateral deals in Beijing, reports circulated in the Ghanaian press with headlines like this one in the *Daily Guide*: “Ghana Surrenders Oil to China.” According to that article, a loan agreement put before Ghanaian Parliament in March 2011 would “mortgage Ghana’s oil for a loan of \$1.8 billion” and “surrender all the concessional rights and intellectual property of the Ghana National Petroleum Corporation, including the seismic surveys and maps as well as exploration, development and production assets... to the Industrial and Commercial Bank of China” (*Daily Guide* 2011). However, the details of the agreement were unclear; the political deals arranged by Ghanaian lawmakers are routinely nontransparent, and China’s processes of decision-making and negotiation are also cloaked in secrecy (Bräutigam 2009). Anxiety suffuses Ghanaians’ reactions to the politics of oil development; political relations within Ghana and political relations between Ghana and China remain ambiguous, rendering the politics of energy opaque and suspicious to Ghanaian observers. This obscurity only perpetuates the general climate of mistrust as citizens wonder, increasingly loudly, if oil resources will be managed on behalf of the nation and its citizens or will be used to bolster the interests of those wielding political power, including both Ghanaian leaders and China. Supposedly, proceeds from oil will be paid directly to the Chinese bank rather than passing through the Annual Budget Funding Process. This agreement, it is argued, will abrogate the provisions of the newly minted Petroleum Revenue Management Act, which at its core aims to ensure that Ghana’s oil resources cannot be collateralized—traded up front to foreign interests in exchange for particular projects or investments.¹⁹ As Member of Parliament Kofi Adda argued, such an agreement would essentially “surrender the nation’s sovereignty to the Chinese bank” (*Daily Guide* 2011).

This general climate of suspicion was evident in conversations with Ghanaian citizens in Accra and also online. The obscurity of African states

and consolidation of power in the hands of the elite make understanding the dynamics of oil politics guesswork for citizens and outside observers alike. Many responses reiterated popular critiques of China's surge into Ghana and other parts of Africa, including China's desire to match its import of Ghanaian oil with its export of cheap manufactured goods. "The oil revenues won't benefit Ghana, China will benefit," said a comment on Ghana Web." They will burn...[the oil], turn it into plastic and sell you DVD players made from plastic...and cheap toys and bowls made from plastic."²⁰ Many Ghanaians suspect that their leaders are manipulating political and corporate relationships behind the scenes to ensure their own wealth from oil at the expense of the prosperity of the nation, and public debate swirls concerning the degree to which Ghanaian political leaders have structured oil agreements to ensure their individual benefit, rather than the benefit of Ghana as a nation. "It is even suspected that our Leaders have dubiously manipulated the system to ensure a special cut for themselves directly or otherwise," said a comment on Ghana Web.²¹

"The fault is in our system of government whereby everything is in the hands of one person, The President, and no one can see the inefficiencies of our system," said another comment on the same site. "Can these agreements [between Ghana and international partners] be challenged in the court of law? If NO then can they [foreign oil companies] be taxed to the extent that the country gets its fair share? I think yes. The next question is, will it be done?"²² According to one comment on the *Daily Guide's* Web site addressed to the nation's leaders,

Please please please, do not sell our future and jeopardise our children's future by making stupid decisions. Manage and utilize the oil revenue to create jobs and opportunities in the country by creating systems that will enable the creation of jobs and opportunities. The proceeds from these can then be used in servicing our debts....²³

Another comment on the same site echoed this sentiment: "We pray that our leaders become wise, and learn to rely on our own resources, instead of always looking to foreigners," the writer said.

Giving out concessions to foreign oil companies is lazy, inefficient use of resources. So the oil will be extracted and sold, like gold and the other abundant minerals, profits will be made by these companies, and we will remain poor in the midst of abundant wealth.... We must act now, else we will continue to wallow in poverty.²⁴

Whether on the ground or online, Ghanaian respondents highlighted their commitment to Ghana's self-determination and independence in the new national context of oil exploitation, and expressed their suspicions about opaque agreements between Ghanaian and Chinese leaders and between

Ghanaian and Chinese oil interests that seem to marginalize the interests in Ghanaian citizens.

To many Ghanaians, control over their own resources is equated with guarantees of freedom. While informants' comments and public perceptions underscore Ghanaians' anxieties about the obscurity of Ghanaian politics, negotiations with China, and the status of oil resources, a series of responses highlighted clear connections Ghanaians make between energy and power, on the one hand, and development and freedom, on the other. Several students and young professionals in Accra specifically expressed associations among energy as a physical system that enables technology, technologies that enable information, technology and information that together facilitate development, and development as a requirement of freedom. For example, a twenty-seven-year-old male student at the University of Ghana explained, "energy is used to power devices that process information needed in every organization...together with other energy-consuming machines for our developmental projects, which an individual benefits from in achieving their economic, physical, and emotional freedoms." Respondents also noted that information, development, and freedom are resources and attributes that can—and ideally do—apply to people as well as states. "Energy gives power, which facilitates information dissemination. Energy helps in industries where goods are produced for development, and development leads to freedom for individuals and society," said a twenty-six-year-old male student at the University of Accra. One response offered by a resident of Accra powerfully integrated notions of energy with perspectives on freedom, and the power of individuals and states to determine their course: "An energy-sufficient country is a powerful one. An energy-sufficient country has access to every information. Energy is a necessary commodity for development. An energy-sufficient person or country has freedom." Overall, urban Ghanaians seem to perceive energy as a force that both powers machines and enables development and freedom. Ensuring an adequate supply of energy is a governmental responsibility, yet government efforts to ensure the energy supply are inadequate. Many Ghanaians view China as a reasonable partner for development in Ghana, but view China's quest for a stake in the Jubilee oil field with anxiety, rejecting the notion of a quid pro quo of oil resources flowing to China in exchange for China's efforts to develop energy infrastructure in Ghana.

Conclusion: Powerplay

The politics of energy in Ghana bring together concepts of energy and power in several senses. In ethnographic interviews, casual conversations, and perceptions expressed in popular media, Ghanaians discuss both energy and power as a material force such as electricity or oil, as an ability to work (agency), and as something that people, political leaders, and nations seek to control. Both energy and power are simultaneously physical entities and discursive metaphors, bringing together the realities of contemporary

Ghanaians' lives and livelihoods with their perceptions of Ghanaian national politics and Ghana's relations with international partners such as China. Marshalling ethnographic evidence, public commentaries, and analyses of energy systems in Ghana, this article has argued that the politics of energy in Ghana can be described as a powerplay; individual people, political leaders, and nations strive to maximize their competitive advantage—their ability to reach their goals and to determine their trajectories of progress—by accessing and controlling energy systems and resources. Analyzing the politics of energy in Ghana brings into focus the role of energy systems and energy resources at individual, national, and international levels. This research has highlighted that access to energy as a material force can promote independence, autonomy, and freedom at each of these levels. At the same time, technical and political systems that control access to energy are characterized by opacity and lack of accountability, leading to public anxieties about the manipulation of energy in the interests of political powers.

In the context of energy resources and energy infrastructure, Ghana and China are engaged in a powerplay: each engages power—in both political and technical aspects—to its advantage. China offers its technical expertise and economic assets to strengthen energy infrastructure within Ghana, simultaneously seeking access to Ghana's newly developed energy resources in the Gulf of Guinea. This relationship effectively ensures that Ghana—a newly oil-rich nation—can provide its electricity-poor citizens with access to reliable sources of energy in their daily lives. At the same time, China—an energy-hungry nation—seeks to strengthen bilateral ties with Ghana, securing preferential political access to Ghana's wealth of energy resources to fuel its own national economic expansion. Ironically, however, this “powerplay” between Ghana and China risks relegating Ghanaians to the sidelines; Ghanaian comments express acute concern that their interests as individuals and communities—their own power, their agency—are curtailed because of the inaccessibility and opacity of both energy systems and political processes.

On the one hand, Ghanaians interviewed expressed a clear desire for self-determination at individual, national, and international levels. Ghanaians seek access to adequate and unimpeded energy in their personal and professional lives, even as they equate energy equality with their equal rights to political representation as citizens of Ghana, and as they express their wish for Ghana to maintain national control over Jubilee oil resources to ensure Ghana's economic independence. On the other hand, Ghanaians decry the reality that they lack control over energy in their daily lives, lament the lack of transparency in national politics, and recognize the important but obscure role that outside forces, in particular China, play in funding, designing, and building the infrastructure that transforms energy resources into electricity. Ghanaians seek to balance their inability to develop their energy resources independently with their clear distaste for the dominion that engaging foreign partners for technical assistance necessarily entails.

This tense balance between agency and dominion is all the more fraught because of the difficulty in evaluating what, exactly, Ghanaian and Chinese leaders have negotiated and agreed to. Because of the murky institutional organization in the Ghanaian state itself, the complexity and manipulation among the main enterprises that are actively developing and exploiting the Jubilee oil field, the opaque relationships among the Chinese state, Chinese financial institutions, and Chinese state-owned oil companies, and the closed-door negotiations between the states of Ghana and China, Ghanaian public discourse about engaging China for energy resources is both anxious and ambivalent. As individual people and as a nation, Ghana needs energy for its development and for the sake of its autonomy. In narratives about power in Ghana, people express the need to access energy in order to achieve power at individual, national, and international levels. Yet throughout Ghana, people feel that they have little agency over energy in their everyday lives, little traction on political-economic forces at the national level, and negligible influence on international relations between Ghana and China.

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Notes

1. In sports such as ice hockey or lacrosse, a "powerplay" is a strategic moment when one team attempts to take gain a competitive advantage, leveraging the team's resources to outcompete a weakened opponent.
2. In order to study relations among Ghana, China, and energy resources/infrastructure and to evaluate Ghanaians' perceptions of this complex system, diverse research methods and sources were employed. In August 2009, four dozen Ghanaians participated in ethnographic surveys. These provided a framework for collecting data as well as impetus for detailed discussion and follow-up in-depth interviews. Accra was selected as the primary research site because of its recent history of blackouts and because institutionally provided energy is a main factor in urban life. Initial participants in Accra and other towns, such as Koforidua, were contacted through my Ghanaian research assistant, Emelia Kumi; the pool of respondents was then expanded using snowball sampling. For the analysis and writing these ethnographic responses were then placed alongside public perceptions gleaned from a wide reading of Ghanaian newspapers, journals, and magazines in both hard copy and online. Online articles and strings of public commentary proved to be especially valuable as they provided insight into ongoing, evolving discussions among Ghanaians both in Ghana and throughout the diaspora. Ghanaian perspectives were complemented by analysis of policy documents that reveal positions and strategies of institutional powers in both Ghana and China. Finally, analysis of these diverse materials was complemented by the reading of published secondary sources concerning China–Africa relations and the politics of oil in Africa.
3. Recent work by the historian Kairn Klieman (2008, 2011, n.d.) documents the complexity of oil politics in African states prior to the 1970s. Her extensive documentation and nuanced analysis underscore the opacity of negotiations and agreements regarding oil. The lack of transparency within the petroleum industry with regard to political connections is intentional, providing African states as well as oil corporations—both the majors and the independents—with a degree of protection from public scrutiny.
4. See, for example, satellite images posted by NASA, at http://eoimages.gsfc.nasa.gov/images/imagerecords/55000/55167/earth_lights.jpg.
5. The map of Ghana is adapted from United Nations Environment Program: <http://www.unep.org/greeneconomy/AdvisoryServices/Ghana/tabid/56355/Default.aspx>.
6. Responding to the question, "What is energy to you?" 11 of 39 respondents (28.2%) replied, with the exact phrase, "Energy is the ability to do work."

7. Although China has been relatively more willing to engage African nations regardless of their degree of transparency and adherence to international legal standards, China nevertheless views its engagements as business, and as such will withdraw from nations where political turbulence threatens their economic interests. For example, China withdrew its plans to invest in a major hydroelectric dam in Guinea in 2008, citing the risks to investment posed by continuing internal political struggles.
8. Revenue estimate by the International Monetary Fund, cited in ISODEC (Integrated Social Development Center) and Oxfam-America (2009).
9. FPSO is the industry acronym for “Floating Production Storage and Offloading,” the name of the enormous vessel that receives oil resources once the drill brings them to the surface, and where the petroleum products undergo initial processing and storage before they are offloaded into an oil tanker or pipeline.
10. Comments posted by Kpeseseh, Toto, and Kantanka on Ghana Web regarding “Another Major Oil Find Off Ghana.” <http://mobile.ghanaweb.com/wap/article.php?ID=190309&mode=comments>.
11. Comment posted by Ekow Koomson on Ghana Web regarding the *Wall Street Journal* (2010) article, “Bid for Ghana Oil Field Rebuffed.” <http://www.ghanaweb.com/GhanaHomePage/NewsArchive/artikel.php?ID=196527&comment=0#com>.
12. Comment posted by Asante-Kotoko on Ghana Web regarding “Another Major Oil Find Off Ghana.” <http://mobile.ghanaweb.com/wap/article.php?ID=190309&mode=comments>.
13. See Akli (2010). Since these figures were published in 2010, the EO Group, a private Ghanaian company, sold its share of 1.75 percent to Tullow, bringing Tullow’s holdings to 36.45 percent.
14. Information on the Kosmos IPO is available in major international newspapers. See, e.g., Selykh (2011).
15. The literature on China’s oil interests in Africa is well developed. See, e.g., Taylor (2006); Soares de Oliveira (2006, 2007, 2008); Ghazvinian (2007); Ferreira (2008); Lee and Shalmon (2008); Yates (2007); Bräutigam (2009); Michel and Beuret (2009); Obi (2010).
16. See Soares de Oliveira (2006, 2008); Ferreira (2008); Evans and Downs (2006); Corkin (2008).
17. Bui Dam project details are available at <http://www.buipowerauthority.com/>.
18. The China–Africa Development Fund was established by the government of China in June 2007 to encourage Chinese companies to invest in African business opportunities that would advance Chinese interests and promote the economic expansion of Africa.
19. Accessing parliamentary documents to establish the veracity of this claim is virtually impossible. However, several independent sources of information appear to converge in confirmation of the agreement to collateralize loans from China with future oil revenues from Ghana. See, e.g., MacDougall (2011); Ramos-Mrosovsky (2012); Ata (2012); Adam (2011).
20. Comment posted by “Dan” on Ghana Web regarding “Another Major Oil Find Off Ghana.” <http://www.ghanaweb.com/GhanaHomePage/NewsArchive/artikel.php?ID=190309&comment=6338946#com>.
21. Comment posted by G. K. Berko on Ghana Web regarding “More Oil Discovered” (2011a). <http://mobile.ghanaweb.com/wap/article.php?ID=245092&mode=comments>.

22. Comment posted by “Yaw” on Ghana Web regarding “Yet More Oil Found” (2011b). <http://mobile.ghanaweb.com/wap/article.php?ID=210522&mode=comments>.
23. Comment posted by “Theelicitor” regarding *Daily Guide* (2011) article, “Ghana Surrenders Oil to China.” <http://ghanaoilonline.org/2011/03/ghana-surrenders-oil-to-china-daily-guide/>.
24. Comment posted by “Sankofa” on Ghana Web regarding “Yet More Oil Found” (2011b). <http://mobile.ghanaweb.com/wap/article.php?ID=210522&mode=comments>.