DRAFT Chapter 1: Dams and Electricity in sub-Saharan Africa: The Political Context

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Introduction

> *Uganda, in the marrow of tropical Africa, may become one of the world's greatest exporters of – electricity.*
>
> - John Gunther, 1955

On January 24, 2002, crowds gathered for a celebration on the banks of the Nile River. Just north of the town of Jinja, Uganda, diplomats, development agency representatives, citizens, Members of Parliament, and the President of Uganda all congregated for what was thought to be the beginning of the construction of a new 250-megawatt (MW) hydroelectric dam – the Bujagali dam.

The location of the ground-breaking ceremony held historical significance. In 1907, a young Winston Churchill, then Parliamentary Under-Secretary of State for Colonies, stood about ten kilometres downstream and reflected on the potential for Uganda to become an industrial force if the waters of the Nile could be harnessed for electric power (Churchill 1989 [1908]). By 1954, the colonial authority saw the first step of its Ugandan hydroelectric-vision fulfilled when the Owen Falls Dam (now Nalubaable Dam) was inaugurated in a ceremony presided over by Queen Elizabeth II.

The vision of Uganda becoming a regional energy superpower never materialized, however. The Nalubaale dam remained the only major source of electricity in the country until 2012. Six decades later, despite decades of effort to improve electricity access and to reform the sector, Uganda carried the unenviable reputation as having one of the lowest levels of access to electricity in the world (IEA 2011). Accordingly, the inauguration ceremony for the Bujagali dam in 2002 was supposed to represent a turning point in what had been a painfully long period of poor and unreliable access to electricity in the country.[1]

President Museveni was the last of the dignitaries to speak at the inauguration ceremony. While other presenters praised Museveni's leadership, persistence and vision in executing the dam, Museveni had sat sternly, showing little emotion. It turned out he was in no mood for celebration or praise.

The President began by stating that he was 'not happy at all' and was 'ashamed'.[2] He did not want to talk about how happy Ugandans were but just wanted to get on with the project. He suggested that a project that should have taken two years to launch had – by this point – taken seven. Museveni said he didn't accept any person's thanks; people were foolish for thanking him. 'Do you thank people for

[1] Between 1971 and 1979, the period of Idi Amin's reign in Uganda, the number of electricity consumers dropped from 69,500 to 60,950 (Uganda Electricity Board 1996; 1999). During the height of civil conflict in Uganda (1979 to 1986) the number of individual consumers increased to over 105,000 but two years after taking power, the country had only 80,795 consumers. Political stability was increasing demand for electricity but the infrastructure could not support it.
[2] The ceremony was rebroadcast on national television February 6, 2002.

feeding their children?' he asked rhetorically (Okwello 2002). After describing Uganda's great potential for producing thousands of megawatts of electricity by harnessing the power of the Nile River and noting the serious electricity deficit in the country, he stated that the process leading to the construction of Bujagali was a 'circus', which had led to embarrassment and undermined their interests: 'this is an occasion of shame and repentance', he said. Museveni finished his speech criticizing the one institution that had invested more in Uganda's energy sector than any other: the World Bank.[3]

The Bank 'needs to stop listening to so many people' and instead 'talk to people in the Third World', Museveni said. The Bank 'listens to a lot of nonsense' and is 'too squeamish and too sensitive to shallow opinions of those who aren't supportive of transformation.' Museveni was making a not-so-veiled reference to Members of Parliament and domestic and international non-government organizations that had raised concerns with the dam which, amongst other factors, delayed its execution – individuals and organizations he labeled as 'economic saboteurs' and 'enemies of the state'. Two days after the ceremony, Museveni went further: 'Those who delay industrial projects are enemies and…I am going to open war on them' (Okwello 2002). The ceremony ended with Museveni climbing onto a bulldozer and demonstrating his

[3] The first project the World Bank financed in Uganda was prior to the country's independence and was focused on electricity. In 1962, the Government of Uganda received a Specific Investment Loan from the World Bank under the title *Electric Power Development Project* (Power I). This project was to support the Uganda Electricity Board's $14.0 million expansion program, of which the Bank loaned $8.4 million.

prowess at moving the earth.

Despite this January 2002 groundbreaking ceremony, the physical construction of the Bujagali dam was delayed repeatedly and did not begin to generate electricity for another ten years. The project was originally conceived as a private initiative under a 'build-own-operate-transfer (BOOT)' arrangement, which was in keeping with a continental trend to unbundle government electricity monopolies and promote private led infrastructure development. In August 2003, however, estimating a financial loss of US $75 million and amidst continuing delays in the start of construction, US-based energy firm AES, which had been given the dam site by the President for development, withdrew from its protracted ten-year effort to construct the dam.[4] Despite this major setback and ongoing local and international concern over other matters such as the political and economic risk of the investment, the future price of electricity, alternative generation sources, environmental impacts, resettlement, cultural and tourism significance, lack of competitive bidding, and low water levels in Lake Victoria, the Government of Uganda (GOU) continued in its determination to construct the dam.

For supporters of the dam, it was viewed as the least cost long-term solution to solve Uganda's energy problems: 'a no-brainer', according to then Uganda World Bank country manager (Robert Blake, World Bank Country Director, interview, May 5 2002).

[4] At the same time that AES withdrew from Uganda, it also suspended a $2.5 billion investment in thermal electric power facilities in Brazil.

Indeed, owing to the comparatively few number of people that would have to be resettled, the high banks of the river which could be used to support the construction, and the presence of an island in the middle of the dam location, which would facilitate the redirection of water during construction, a site engineer explained: 'if you want to build a dam, this is the ideal site.' Hence, in early 2004, the Government reissued a call for tenders to construct the dam. One year later, in May 2005, the government announced that the Industrial Promotion Services (IPS), part of the Aga Khan Fund for Economic Development (AKFED) – the economic development arm of the Aga Khan Development Network (AKDN) – along with its partner company, SG Bujagali Holdings Ltd, an affiliate of US-based Sithe Global, LLC, won the contract to finish construction of the dam (Daily Nation 2005). The Bujagali dam was finally operational in February 2012, two decades after formal project implementation activities had begun and almost a century since the dam's location had been identified as a potential site for a hydroelectric dam by colonial authorities. During the time it took to execute the project, the consequences of poor access to electricity in the country proved debilitating domestically. It also had significant effects regionally and politically.

In 2005, while Uganda's population had increased to nearly 27 million, the percentage of people with access to electricity remained at about 4%. Adding to this, due to low water levels in Lake Victoria, variously attributed to drought, excessive irrigation, and overuse of water for electricity generation, in 2006 Uganda's capacity

to generate electricity dropped from an estimated 500 megawatts (MW) to just 135 MW for the entire country.[5] Meanwhile, 'effective demand' for electricity – what consumers could and would pay for – was growing at about 30 MW per year (over 20% per year). In order to meet demand and limit the already regular power cuts, two large and expensive 50 MW diesel generators were added to the national electricity grid, and electricity was imported from Kenya. The importation of electricity from Kenya was a significant reversal in regional electricity planning.

In the early 1990s, when there was optimism about the fast completion of Bujagali, plans were already being made to sell surplus Ugandan electricity to Kenya, Tanzania, and Rwanda, and for Uganda to become a regional energy exporter, particularly as the country built more dams on the Nile. Hence, the dam was supposed to satisfy domestic demands at the same time as serve as central industrial development strategy. The failure to execute this vision resulted in neighbouring countries quickly reassessing and altering their own energy planning and others moving quickly to trump Uganda's aspirations as a dominant regional energy exporter.

Kenya, for example, began major investments in new energy sources – geothermal, wind, and co-generation. Ethiopia continued with massive investments in

[5] According to real and estimated data from the United Nations (data.un.org), in 2006, the total installed generating capacity of Uganda relative to other countries was: Chad, 31 MW; Central African Republic 41 MW; Rwanda, 57 MW; Senegal, 488 MW; *Uganda, 506 MW*; Ethiopia, 816 MW; Tanzania, 957 MW; Kenya, 1392 MW; Côte d'Ivoire, 1499 MW; Ghana, 1730 MW; Zambia, 1770 MW; Zimbabwe, 2005 MW; DRC, 2444 MW; South Africa, 42 500 MW.

new large, controversial hydroelectric projects. For example, in 2013, a new transmission line was approved for construction between Ethiopia and Kenya, which would bring power from the controversial Gibe III dam project in Ethiopia to Kenya. Critics suggest that the transmission line, financed by the African Development Bank and the World Bank, is tacit, if not direct support for the 1870 MW dam project that threatens to reduce water flowing into Lake Turkana in northern Kenya that will eventually lead to it drying up (see International Rivers 2013). In Ethiopia's rapid construction of several large dams it has secured electricity export agreements with Djibouti, Sudan, South Sudan, and most controversially with Kenya, which is conflicted about concerns for the livelihoods of the Turkana people and its own need for electricity. The Grand Ethiopian Renaissance Dam (GERD) is another major undertaking in Ethiopia. The project, one of the largest potential dams ever built in the world, has raised significant international concern and tension in the Nile Basin owing to fears in Egypt of decreased water supplies, and international advocacy and information campaigns about the risks of the project by the group International Rivers. International Rivers has been critiqued harshly for being 'anti-development' – a common refrain used by governments – when it shares expert, and sometimes leaked assessments of major dams, like the GERD project (see International Rivers 2014).

While Uganda awaited the construction of the Bujagali dam rolling blackouts continued, and demand for biomass for energy (firewood and charcoal), already the

primary source of energy for 95% of Ugandans, rose. The situation in the country was so serious in the 2000s that projections of 7% economic growth were reduced to 4.5% largely due to power shortages (Among and Kalinaki 2006). The capital city, Kampala, became sarcastically described as 'generator city' given the constant hum of small diesel generators (Onyango-Obbo 2006). Adding insult to injury, in late 2006, Ugandans were paying more for electricity than any other country in the region. Household consumers were paying a *subsidized* per unit price of electricity of US 24 cents/Kwh. The Uganda Transmission Company Ltd., owned and operated by the government, subsidized the price of electricity by US 126 million in 2006 (Monitor 2006a). Without the subsidy, at the end of 2006 domestic consumers would have been paying just over US 30 cents/Kwh. In comparison, in the same year, amongst Organization for Economic Cooperation and Development (OECD) countries, the lowest average household price of electricity was US 9.4 cents/Kwh (Norway), while the highest was 25.8 (Netherlands); in 2005, the average per unit price of electricity amongst all OECD countries was 12.7 cents/Kwh (IEA 2007, II.48). It was not surprising then that in summarizing the state of the electricity sector in Uganda in the mid-2000s, the Minister of Energy, Daudi Migereko, concluded frankly: 'We are in a crisis' (Iziwa 2006).

How did a country held up as a 'show case' of reform (see Dijkstra and van Donge 2001), a country receiving more favourable support from donors than other

neighbouring countries with similarly questionable political regimes (Dijkstra and van Donge 2001; Harrison 2001; Muhumuza 2002; Tripp; 2004, 2010), find itself in such a perilous situation and unable to execute reforms necessary to improve its energy sector and electricity access? Given that no country has developed beyond a subsistence economy without ensuring at least minimum access to electricity for a broad section of its population (World Bank 2000), the 'electricity problem' in Uganda and sub-Saharan Africa more broadly is puzzling. In 2014, the most dominant countries economically in the sub-continent, South Africa and Nigeria, were each embroiled in desperate efforts to maintain regular power supplies. How can an issue deemed to be so essential to social and economic development be so difficult to address?

This book examines the politics of electricity and infrastructure provision in sub-Saharan Africa. The book is not a general review of all dimensions of energy, technology and development in sub-Saharan Africa and does not serve as a textbook on energy access in the sub-continent. It is an examination of the historic and contemporary *political* challenge of providing a critical public service – electricity – and how this challenge has evolved in sub-Saharan Africa since the late 1990s.

The central argument of this book is that *how* governments have responded to the provision of electricity and *how* they have executed reforms and large energy infrastructure undertakings, like dams, offers a unique window into the changing

political landscape in the sub-continent. The book shows that the politics and processes surrounding these undertakings must be understood as more than conflict-laden development initiatives. The process of electricity reform and decisions about service provision and technological choice during the late 1990s and early 2000s, in many countries, reveals the shifting relationship between national governments and customary development partners, and nation-states and domestic civil society organizations.[6] I argue that the politics of electricity and dams reveals the 'new politics' in sub-Saharan Africa that started to emerge in the late 1990s: a politics where African governments and leaders grew increasingly frustrated with the rules and processes western and multilateral donors promoted; where new 'development partners' such as China started playing an increasingly prominent role in infrastructure and development financing thus altering the donor-state relationship; where domestic and international institutions of oversight and project evaluation, such as courts and Parliament, became more assertive and more influential; and, where domestic civil society organizations became increasingly willing to challenge the development process of their nation-states, thus increasing domestic tension while questioning state development policy and trajectories. The book follows in the spirit of Albert O. Hirschman's classic work on the politics of development projects, by examining the

[6] Andrew Mertha's 2010 book, *China's Water Warriors,* offers an impressive account of how grassroots opposition to hydroelectric dams in China in combination with a changing political and policymaking landscape in the country produced a situation where non-state interests emerged to hold new influence in national policymaking.

development apparatus itself and looking at the intersection and convergence of local, national and international interests in political and development decisions. Further, it reinforces and adds fodder to critical contemporary studies of how technical solutions to economic and poverty problems have often trumped the complex character of political, social and economic relations in a given country in order to achieve some vague goal of 'national development' (see Easterly 2013).

The book draws from almost fifteen years of research in one energy poor country – Uganda. The most in-depth research took place between 2001 and 2003 during my doctoral research, supported by an IDRC doctoral research grant. Subsequent field research took place in 2008, 2010, 2012, 2013 and 2014. In total, over 150 interviews with government, non-government, private sector, bilateral and multilateral representatives, along with households and citizens inform the research. In addition, throughout this period, other research on energy was conducted in the region (Ethiopia, Kenya, Tanzania) and offered direct comparative insights, along with ongoing reviews of events in other countries. The case of Uganda is compared and contrasted with regional and continental examples and research to produce a cautionary tale of electricity reform and dam construction relevant to many other countries. And while the experience and lessons from Uganda remain central in the book, the country's struggle with electricity is not unique in the sub-continent where poor electricity access and blackouts remain common.

Electricity and the new politics of African development projects

In 2002, only slightly more than 20% of sub-Saharan Africa's entire population had access to electricity compared to 85% in North Africa, Latin America, East Asia and the Middle East, and 40% in South Asia (Saghir 2005, 9). By 2009, the International Energy Agency (IEA) estimated that slightly more than 30% of the population of sub-Saharan Africa had access to electricity (IEA 2011). In many countries, such as Malawi, Uganda, Tanzania, Mozambique, Democratic Republic of Congo, and Burkina Faso less than 15% of populations have access to electricity; only 4 countries of 28 countries documented by the IEA in its 2011 World Energy Outlook had access to electricity rates greater than 50% (IEA 2011).[7] 'There is a chronic shortage of electricity supply in at least 25 countries in sub-Saharan Africa. At 68,000 megawatts (MW), the entire generation capacity of the 48 countries of Sub-Saharan Africa is no more than that of Spain' (ICA 2010). In 2007, the International Energy Agency (IEA) estimated that sub-Saharan Africa (SSA) required $7 billion a year in investment solely for new power generation capacity; if financing for transmission and distribution systems are added, annual investment would need to increase $30 billion per year (Vedavalli 2007, 348).

[7] The four countries were Ghana, Mauritius, Nigeria and South Africa.

The gulf between demand for electricity and supply in sub-Saharan Africa has reinvigorated the international community's focus on investments in energy infrastructure as a central developmental priority. Indeed, in light of the global financial situation that emerged in 2009, the Infrastructure Finance Corporation (IFC), the World Bank, the African Development Bank, and other bilateral agencies established new financing instruments for infrastructure that had a principal aim of facilitating private investment at a time when access to capital was becoming more challenging.[8] In June 2013, U.S. President Obama followed suit by announcing $7 billion in financial support and loan guarantees for mobilizing investments in and access to electricity in sub-Saharan Africa. Under 'Power Africa' the U.S. Government aims to work with the private sector, governments and international institutions to add upwards of 10,000 megawatts of electricity to the sub-continent by 2018. Amidst these investments and announcements, one thing has that has been surprising and contentious is the prominence that large hydroelectric dams are playing in these development plans: Once the physical manifestation of negative, 'high modernist' (Scott 1998) development thinking, large hydroelectric dams have re-emerged as principal engines in national economic and social development strategies.[9]

[8] Examples of financing instruments include the Infrastructure Consortium for Africa (ICA), the African Development Bank's Emergency Liquidity Facility, the World Bank's Infrastructure Recovery and Assets (INFRA) platform, and the IFC's Infrastructure Crisis Facility.

[9] There is no agreed upon definition of a 'large dam'. However, a general guide according to International Commission on Large Dams (ICOLD) is that any dam that is over 15 metres high is considered large, while a 'major dam' is one

Nyaborongo in Rwanda; Merowe in Sudan; Bui in Ghana; Gibe III and Grand Ethiopian Renaissance in Ethiopia; Grand Inga in the DRC; Kunene in Namibia; the Highlands Water Project in Lesotho; Lom Pangar in Cameroon; Mambilla in Nigeria; Mphanda Nkuwa in Mozambique; Bujagali and Karuma in Uganda – these are the names of a small sample of large hydroelectric dams or projects under construction, planning, or consideration, which will require enormous capital investments.[10] The turn to large dams as a dominant source of energy generation in sub-Saharan Africa is controversial, but also not surprising for several reasons.

First, the World Bank estimates that of the sites in Africa with current potential to produce hydropower 93% are 'unexploited' (World Bank 2009). Thus, as some argued years ago, there exists a large volume of 'untapped surplus power' (Ranganathan 1998, 3). Given population increase and electricity demand in most African countries, the need for electricity is pressing; electricity is amongst the highest priority sectors needing reform and investment in some countries as the absence of reliable supply undermines investment confidence and hinders the productivity of small, medium and large-sized enterprises (Reinikka and Svensson 2001). What is more, despite the odd absence of research on the direct, individual household, and

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which is higher than 150 metres high, has a volume greater than 15 million cubic metres, reservoir storage of more than 25 cubic kilometres, and/or electricity generation of more than 1,000 megawatts (Khagram 2004, footnote 9, 217).

[10] In 2010, International Rivers, a prominent and outspoken critic of the choice to build large dams for electricity, assessed that across the sub-continent 70 different hydroelectric projects were in planning (International Rivers 2010).

human benefits of access to electricity in relation to economic activities, education, health and security, research has started to reveal indirect benefits from electrification that were assumed but not demonstrated, such as a more informed citizenry (see World Bank 2010). Given the World Bank's overarching mission to reduce poverty, the ongoing need for power sector improvement, poor access, and the potential for hydroelectric dams to theoretically play a fundamental role in meeting industrial and household electricity needs, a decade ago the Bank reasserted its support for dams by saying that it would 're-engage in high-reward-high-risk hydraulic infrastructure' (World Bank 2004, 3).

Second, dams have been used for hundreds of years for flood control, irrigation and to generate power for economic development (see McCully 2001; Everard 2013). Hence, proponents of large dams in sub-Saharan Africa do not hesitate to point to countries like Canada, the United States and Norway to argue that large dams have been critical to economic development (World Bank 2009) and that the consequences of their construction 'must be carefully evaluated against the benefits *by Africans*' (Meraji O.Y. Msuya, Executive Director, Nile Basin Initiative, interview, January 14, 2003, emphasis added).

Third, global construction of large dams peaked in the 1970s (World Commission on Dams 2000, 9), but with the vast majority of dam construction

concentrated in developing countries since this time.[11] Owing to the World Bank's central role as a financier of large hydroelectric projects in the 1970s and 1980s, critiques of large dam building in economically poor countries ran in parallel to critiques of structural adjustment and transparency at the Bank and in Bank financed projects. One outcome of this era was a proliferation of multinational advocacy organizations pressuring the World Bank to institute more stringent operational policies for projects (including environment and social assessments and resettlement policies and safeguards). A second related outcome was that the Bank had to begin to heed emerging global norms that promoted and respected indigenous rights, transparency in decision-making, environmental and resettlement policies, and a genuine consideration of alternatives to large dams (Khagram 2004; Leslie 2005). These global norms began to take solid root following the Bank's controversial involvement in the Indian mega-dam project, Sardar Sarovar, in the mid-1980s (see Khagram 2004; Leslie 2005), and reached a pinnacle of attention when a global dialogue about the role of large dams in development was organised under the auspices of the World Commission on Dams (WCD 2000). In contrast to deterring future investments in large dams, however, the emergence of these global norms and associated policies designed to alleviate past problems with construction seem to

[11] Khagram explains that declining opportunities for dam construction in industrialized countries, coupled with demand in developing countries and increased access to credit for construction led private firms to shift attention to developing countries. Thus, "…approximately two-thirds of the big dams built in the 1980s and three-quarters under construction in the 1990s were in the third world" (Khagram 2004, 10).

have instilled a new level of confidence in dam construction efforts. Countries and donors supporting or promoting large dam construction refer to the existence of these policies and norms to suggest due diligence when funding requires them, even if they are not applied uniformly. Ironically, the emergence of these global norms and operating principles also helped produce a shift in the politics and financing of large dams; as the application of these norms became more common, and civil society argued against dams or at minimum the application of safeguards, African governments grew increasingly frustrated with delays and procedural challenges these policies produced. The result was the rising influence of 'non-Western' sources of financial assistance for dam building. Hence, a fourth reason large dams have become popular is due to a turn away from the policies and financial requirements of customary developments in the 'West' to new partners, particularly China.

China's influence in Africa is looming large (Michel and Beuret 2009; Brautigam 2009) and has altered the economic and political landscape for how non-western and western countries engage with and try to influence African countries, particularly with respect to natural resources (Carmody 2011). Along with China, other non-western or non-traditional development partners are also increasingly prominent in the development of electricity infrastructure in the sub-continent, such as the Arab Fund for Social and Economic Development in Sudan (Verhoeven 2011, 135) or the Islamic Development Bank in Uganda (Anonymous, Rural Electrification Agency employee,

December 15 2012). But China's dominance in dam construction in sub-Saharan is unmatched. "China has emerged as the world's dam superpower" (Verhoeven 2011, 123).

China's dominance in infrastructure development generally and dam construction specifically has altered the landscape of interests and forces promoting, financing and building large dams and is altering the landscape of donor-state relations in African countries. This has led some western donors to look for ways to remain relevant and influential in the development trajectory of African countries where China is active in dam building, such as Ethiopia. Here, some western donors are financing capacity building and planning initiatives in electricity as opposed to financing hard infrastructure in order to allow them to continue to have a role in the sector but without being tied to controversial projects (Anonymous, European donor representative, Addis Ababa, November 26 2010): "The Chinese are popular with African governments because they build things: infrastructure. Western donors have recently not been keen on roads and ports and are positively allergic to dams…'We like the Chinese. When they say they will do something, they do it. No consultants, no environmental impact, no delay. You get your road'" (Dowden 2009, Loc 5595 of 6533).

The rise in China's participation in sub-Saharan African dam construction efforts is pragmatic and strategic. Domestically, no country has a higher number of

large dams in the world then China (WCD 2000, 9).[12] Since the 1950s, the task of building these dams has largely fallen to the state-owned enterprise, Sinohydro, which is 'the world's number one hydroelectric company and leading dam-builder in China and across Africa…Sinohydro's African operations account for 42% of its non-Chinese profits. Besides Sudan, it has built – or is building – dams in 25 other African countries' (Verhoeven 2011, 124). In Uganda, mirroring the controversy and role of the President in the Bujagali dam, China Water and Electricity Corporation (CWE) has been hand-picked by the President to build the next dam on the Nile, the Karuma dam, despite much controversy internally over whether the contract was awarded properly (Wakabi 2013).[13]

There is a very long history of foreign governments leaving a lasting mark on the rivers and hydroelectric landscape in sub-Saharan Africa. At the turn of the last century, Great Britain governed territories containing more than half of the world's big dams (Khagram 2004, 5): 'British colonialists were the most ardent dam builders outside Europe and North America in the late nineteenth and early twentieth centuries, leaving the mark most firmly on the basins of the Indus, Ganges and Nile' (McCully 2001, 18). France was equally active in its North African colonies, with control over

[12] In its 2000 final report, *Dams and Development*, *A new framework for Decision-making*, the World Commission on Dams, reports that China alone had over 22 000 large dams or close to half of the world's total number, while before 1949 it had only 22 large dams (WCD 2000, 9).

[13] The China Water and Electricity Corporation is a subsidiary of the state-owned company, China Three Gorges Corporation, the company established in 1993 to build the Three Gorges Dam.

water serving as a mechanism to control the colonies (Pritchard 2012).[14] Given this history, what makes China's presence different?

China's role in dam construction and natural resource extraction is not a new form of hydro-imperialism for the country has little interest in influencing the domestic political affairs of African governments (Carmody 2011). Instead, China's influence is strategic and opportunistic: its presence is a function of its desire to gain favour for access to natural resources and to serve as an alternative and preferred 'development partner'. Its influence is also a result of a shifting set of relationships between Western donors and African governments when it comes to dam and infrastructure construction. Because China does not abide by the same operational policies that the World Bank and Western bilateral donors follow when undertaking or financing infrastructure projects, it becomes a desirable 'partner' as the speed of review and execution can be faster. Indeed, as will be noted later, the experience with multilateral donor policies in some East African countries has led governments to purposefully look for alternative financing arrangements. The potential benefit of working with China is further heightened in African countries that are transitional democracies, that have weak concentrations of civil society organizations, or that

[14] Richard Dowden (2009) writes that when the British took over Sudan in 1899 it had little to do with Sudan "and everything to with India, the 'jewel of the crown' of the empire" (Loc 1825 of 6533). The British feared that the French might be able to stop or divert the Nile, thus eliminating easy access to India via the Suez Canal. Thus, "…the British became convinced they must control the Nile from mouth to source in case another European power took it and threatened the route to India" (Loc 1831 of 6533).

have simply grown frustrated with the time it takes to implement projects following global norms and policies. China's emergence as a prominent player in African dam construction thus is a result of two complementary dynamics: Chinese advocacy and entrepreneurialism, and African government frustration with and/or resistance to the processes of infrastructure construction and financing used historically. The presence of China and other non-western lenders in African electricity sectors therefore has important instrumental and political outcomes.

Sub-Saharan African countries now have more options for project financing and execution than previously and can look away from traditional western lenders to support and execute large infrastructure projects. The presence and role of private firms in dam construction is decades old, but historically, if private firms were to independently lead dam construction initiatives or were to partner in dam construction they would have to have project financing underwritten by bilateral or multilateral development finance institutions such as the International Finance Corporation (IFC) to cover economic and political risks. China's financial resources and experience in dam construction thus offers African governments greater choice in assessing *who* will be their electricity 'development partners' but also *how* electricity expansion will take place. It is the 'how' of electricity provision and expansion and the conflict and political change that ensues in that process that is a central concern in this book.

Rationale for the book: The politics of infrastructure and projects

The politics and conflict of dams and infrastructure development have been of interest to researchers for decades. In his classic book, *Development Projects Observed*, Albert O. Hirschman examined the role of the state in project implementation and introduced the alluring notion of the 'hiding hand' – an invisible hand that emerges in project development to conceal project difficulties until implementation is well underway. Hirschman observed that project planners often underestimate the costs of projects and when confronted by implementation difficulties press harder for the project to be completed: an underestimate of project difficulties is required "so that perfectly feasible and productive projects will actually be undertaken" (Hirschman 1995[1967], 17). Other work in the same time period acknowledged the political importance of hydroelectric dams, and the almost mythical appeal (Scott 1998, 166) they hold for leaders:

> A hydroelectric project is fine political capital. The politician looking for a good public works project is much more likely to select power if it is hydro. The hydro complex has drama and style, and there is an air of extravagance in its hugeness and grace which is awesome in a country trying to mobilize scarce resources for development. Though hydro supplies a basic necessity, it creates the aura of a country which no longer has to scrimp and save, but can spend with largesse. Its hugeness and its taming of a wild river bespeak a technological victory, and it imparts dignity to the people and the country who conceived it. (Tendler 1965, 250-251)

This early research encouraged an examination of the process of project implementation. But it was also criticized by some scholars of Africa, suggesting that

there seemed a general acceptance of the projects that the 'development apparatus' promoted and not enough critical reflection on the logic and mode of the 'apparatus' itself: the 'development apparatus', does not make "its effects felt only through documents and reports, but also through policy, programs, and most characteristically, 'projects'" (Ferguson 2005 [1990], p. 74).[15] For some years then, an examination of the relationship between politics and technological or technocratic solutions to 'development problems' has been deemed important, but surprisingly under-examined, particularly in relation to energy. In a 1980 article on the Aswan High Dam for example, the authors wrote that '…we know far too little about the linkages between technical and political aspects of the decision-making process, the problems of selecting and assessing policy options that have large technological components, or the appropriateness of various theories of decision making to technical controversy' (1980, p. 36). Yet, despite more than three decades of political, economic and social sector reform in sub-Saharan Africa, there still remain few examinations of the politics and conflict surrounding reform processes and project implementation (see Brock, McGee and Gaventa 2004; Keeley and Scoones 2003) that parallel a few well-known exceptions in other regions (Grindle 2000; Grindle and Thomas 1991). Why, for example, do governments choose to build hydroelectric dams over other electricity

[15] Ferguson further notes that projects are set up to provide technical solutions to 'problems' that are not necessarily technical in nature, setting aside historical, political, and structural factors at the root of problems in project implementation (Ferguson 2005 [1990], p. 87).

generation options? How do dams factor into the mix of other solutions to energy problems? Do 'big' problems require 'big' solutions?[16]

The failure to examine the politics of mega-projects (Flyvbjerg 2003) or what I argue are 'mega-undertakings' (those that combine hard infrastructure investments with widespread policy, program or institutional reform) in Africa, is significant given that dam and electricity expansion projects are taking place in a much different social and political context than in the past: re-regulation, unbundling of government monopolies and privatization commonly accompanied dam construction and electricity expansion efforts in the late 1990s. These 'second generation reforms' contrast markedly with first generation macroeconomic reforms like currency devaluation that could be done in a 'stroke of the pen' and did not encourage, require, or solicit a high degree of public scrutiny (Brinkerhoff and Crosby 2002, p. 22). In contrast, dam construction and electricity reform today solicit much more controversy and critical consideration owing to the presence and prominence of international and domestic civil society organizations, greater access to information, ease of communication, and a willingness on the part of domestic civil society to engage in debate with governments or donors. The result is simple: increased conflict domestically, but in a manner that remains unorthodox in many countries; state-society and state-

[16] I am indebted to the late University of Toronto professor, Dr. Rodney White, mentor, colleague and friend, for asking me this question early on in my research.

international conflict now often materializes in formal public and legal forums. In the case of Uganda, domestic and international NGOs were criticized for their self-interest and blamed as the reason for Bujagali failing to be built in a timely manner (Mallaby 2004) – a view the President of Uganda wholly agreed with calling NGOs 'economic saboteurs' and 'enemies of the state'. While this observation is accurate, it fails to note When governments are frustrated with project implementation processes that are time consuming and that reveal the hidden costs or realities of project activities, then the potential for conflict to emerge in the implementation of projects and reforms escalates – processes that on paper are thought to be rational and linear and easily replicable (Hirschman 1967) but in reality of course are context dependent. In Uganda, donors and the World Bank, along with President Museveni, assumed the electricity reform and dam construction process could evolve in a short period of time, in a linear manner, and would be largely technical in nature (see Grindle 2004; McGee 2004; Gaventa 2004). In retrospect, and as will be explained later, more than one Bank official very familiar with Uganda's energy reform experience in the early 2000s admitted to me in confidence years afterwards that that the construction of a large dam and the reform of a sector at the same time in Uganda was too risky and progressed too quickly. Indeed, Uganda's experience with electricity reform in the early 2000s is a near ideal 'critical case' for Easterly's (2013) argument about what happens when technical goals and expertise and a powerful

national leader that dismisses opposition and debate as 'anti-development' are combined: the desires and goals of the individuals and poor are overwhelmed and lost in the race to implement projects.

Some multilateral development agencies have openly acknowledged that "it's time to look beyond the specific content of policies to the *critical processes* that shape these policies, carry them forward from idea to implementation and sustain them over time" (Inter-American Development Bank 2005, 1, emphasis added). In the mid-2000s, at the height of the privatization and energy sector reform period in sub-Saharan Africa, the World Bank also suggested many procedural and process-related conditions deemed necessary for successful reform (World Bank 2004). Despite this, one of the central issues often overlooked in energy is that these conditions – these 'critical processes' – have remained subservient to technical and regulatory goals with the political context and shifting political character of countries not taken into consideration. The politics and process of state-society interactions during reform and project implementation are treated as secondary concerns to technical matters, and in turn, are put aside in the rush to execute a reform. In doing so, the 'indirect effects' of the process leading to the execution of the project or reform are not well considered; as Albert Hirschman noted four decades ago, ignoring the indirect effects of a project implementation process may inflict penalties that are anything but nebulous (Hirschman 1995[1967], 163). Indeed, the outcome of Uganda's experience

with its early dam construction efforts were – rightly or wrongly – directly connected to the World Bank and influenced the government's approach to the energy sector in future. As one former, senior member of the Ministry of Energy explained: "We swallowed the gospel and have moved on" (Interview, senior government official, Ministry of Energy, 23 June, 2008).

Approach and organization of book

Following increased research attention to the politics and process of dam construction, social sector reform, privatization, policymaking, and service delivery in Africa and the developing world generally, this book examines the politics of energy sector reform and dam construction in sub-Saharan Africa. It is principally an examination of this experience in Uganda, but drawing observations and lessons from other countries in East Africa and sub-Saharan Africa. At the core of the analysis is a focus on the processes through which local, national, and international interests and actors converge in decision-making, particularly exploring how and why large dams have arisen as solutions to electricity provision challenges.

National governments have the unenviable task of trying to mediate successful policy interventions from both international expert bodies and marginalized groups (Forsyth et al. 1998, 38). This situation is further complicated by the evolving and maturing bureaucratic systems in African countries which are trying, and being forced

to learn (at an historically unprecedented pace) how to respond to a more vigilant, informed and globally connected citizenry, while also trying to administer reforms. In the late 1990s and early 2000s, many national governments in sub-Saharan Africa were highly influenced by multilateral development agencies, and for some, international donors were better understood as political actors deeply imbedded in the African state, if not part of it (see Harrison 2001; 2004; 2005)

Harrison noted, for example, that in the early 2000s, politics in African countries had been dominated by 'donor dependency' (2001, 660): "…rather than conceptualizing donor power as a strong external force on the state", Harrison suggested that it was "more useful to conceive of donors as *part of the state itself*. This is not just because so much of the budgeting process is contingent on the receipt of donor finance, but also because of the way programmes and even specific policies are designed and executed" (Harrison 2001, 669, emphasis in original). The experience with energy sector reform in Uganda supports this general contention. In Uganda, donors were intimately involved in not only pushing a reform agenda, but also in defining and shaping the manner in which state and society interacted in those reforms, thus requiring researchers to understand politics in a qualitatively different way (Harrison 2001, 661). This is an important observation for analysis, but also when trying to understand the political fallout from how donors, the state and society interact; put differently, it is important for understanding what Hirschman described as

the 'indirect effects' of implementation decisions. Hence, there is a need to conceptualize the past and current character relations between state and non-state actors in a manner that captures the reality of how multiple interests from the international through to the local level interact. I argue that a 'governance approach' to politics, policymaking and reform offers 'a qualitatively different way' of understanding politics, and serves as a valuable overarching analytical and conceptual framework for understanding how reform takes place and why and how these processes shape politics and policy outcomes.

My use of 'governance' is not derived from a central concern with improved public management or corruption – a view most often associated with the World Bank. My focus is on understanding and characterizing how state and non-state interests interact over energy and electricity issues in order to understand how these relations influence politics and outcomes. Using 'governance' to frame the study of energy and infrastructure builds on more than a decade of influential (and divergent) uses of the term in development and African studies, along with conceptual discussions of the concept in political science and political theory (see Hyden and Bratton 1992; Hyden et al. 2000; McCarney et al. 1995; McCarney 1996; McCarney 2000; McCarney and Stren 2003; Stren and Polèse 2000; Olowu and Sako 2002; National Research Council 2003; Pierre 2000; Ericson and Stehr 2000; Kjaer 2004). One of several reasons that the concept is attractive for political analysis is because

it emphasizes that the state is not the only locus of decision-making authority (Lofchie 1989 in McCarney et al 1995a, 94). This observation is particularly important for studies of African countries, where a state's ability to provide services is frequently challenged by a lack of capacity and resources, and because non-state actors have an indelible impact on policy decisions and a role in providing services. Therefore, understanding the character of relations between state and non-state interests, and the social and political context in which these relations take place and decisions are made, points to the importance of understanding the character of governance in a particular country and for a particular sector. Understanding the character of governance in Uganda's energy sector helps capture the context in which reform decisions are being made and policy formulated.[17]

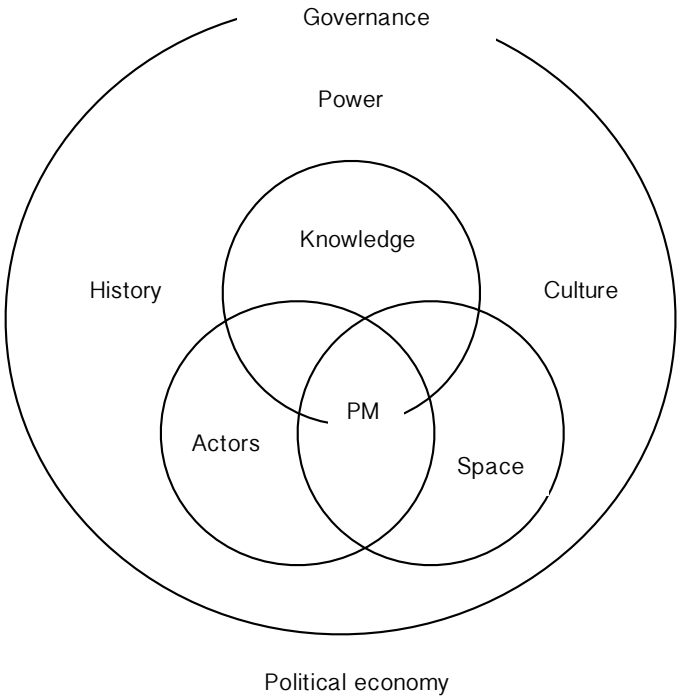
The notion of 'governance' in this study is defined as the 'character of relations between state and non-state actors'. It is an objective empirical framework which can describe relationships generally or be broken down and applied to specific policy or decision processes in order to understand the influence of different actors in the process of decision-making. Building on categories developed by researchers associated with the Institute for Development Studies (IDS) at Sussex University, I use

[17] Goran Hyden has done much to popularize this view of governance (see Hyden and Mugabe 1999; Hyden and Court 2002). His suggestion is that governance issues occur at a meta-level, above all other political activities while policymaking sits at a second level below governance. The argument, which will be elaborated and critiqued in Chapter 2, is that character of governance in any particular political setting – the character of the relations between state and society – frames all other decisions made.

three factors to help understand the interaction between state and non-state actors in energy sector reforms. These factors are: 1) the actors included and excluded from decision-making; 2) the structure or space of decision-making, considering for example, such issues as the forums for public debate and opportunities to contribute to these forums; and, 3) the knowledge included and excluded from decision-making. These categories build on the observation that policy is a dynamic process, which is influenced by actors from the international through to the local level, the knowledge they carry, and the spaces in which they interact (McGee 2004, 8).

Policymaking, of course, does not exist in a vacuum (McGee 2004, 22). The way decisions are made and reforms executed are a function of the relationships between actors (governance), and broader issues relating to history, culture, political economy, politics, and power relations. Recognizing this, Figure 1.0 presents the relationship between governance and policy analysis, and depicts the analytical approach applied in this research. Put simply, this approach suggests that in order to understand the decisions and problems encountered in energy sector reforms, one must understand the dynamic, complex and multilevel interactions between the dominant actors in that reform process.

Figure 1.0: Analytical framework for analyzing policymaking and reform



Source: Adapted from McGee 2004

PM = policy making

The outcome of this approach is not an explicit statement about the strength or weakness of specific policy proposals, initiatives, or approaches. While I clearly reflect on the short and long-term political and social impacts of the process and decisions made, like Merilee Grindle's statement about normative judgments in her research on education reform in Latin America (2004, 2), I leave the determination of right or wrong to energy specialists and to the citizens of each country.[18] My central

[18] As much as this admission will be disappointing to those international and Ugandan non-government organizations who provided me with so much information and time and who are critical of the World Bank and Government of

intent is to reveal how the evolution and character of state-society relations has influenced energy provision and the political interactions between state and non-state interests from the international to the domestic sphere, and from civil society, the state and private sector. It is from this approach that I return to the central argument of the book: the problems in dam construction and energy sector reform in Uganda are symptomatic of a changing political environment in the country that was not well anticipated or recognized by the national government or international donors. Reforms and early dam construction efforts rested on false assumptions about the ease of reforms, the complicity of domestic civil society in supporting or not challenging reforms, and stability in international financial conditions, which did not materialize. The processes the World Bank required in order to finance the project (and that international civil society had been advocating for decades) and the institutional reforms required to undertake reforms and construction, exaggerated these problems and increased domestic tension. Thus, while the World Bank held to its apolitical role, its requirements for dam construction and state-society engagement were anything but apolitical. By ignoring the political conflict and tension that the reforms would produce, and assuming that reforms could evolve without an interruption in the process, the national government became very frustrated when problems did naturally

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Uganda's approach to energy reforms, this does not mean I do not point out the inconsistencies in policies and approaches employed and the failure to consider alternatives.

arise. As the President blamed the World Bank, opposition MPs, and domestic and international civil society organizations for the slow down, few were willing to acknowledge that what had emerged in Uganda was that reforms were taking place in a fundamentally different context than macro-economic reforms implemented in the country a decade earlier. Hence, the small country of Uganda and the often-overlooked issue of electricity and dams in sub-Saharan Africa, emerges as a very important window into changes in state-society relations and the international political economy of Africa in the mid-2000s.

The remainder of the book is organized into four chapters. In Chapter 2, contemporary and historical challenges of electricity in development are examined. The chapter begins by highlighting what is known, and more directly, how little attention electricity has received in English language academic studies of politics and development in Africa. From this context, the chapter goes on to highlight the regional political history and political economy of electricity and dam construction in East Africa. This chapter shows the currency of historic debates over public versus private delivery of electricity and dam construction, along with debates about electricity for industrial versus individual use. Chapter 3 examines electricity and energy sector reform in developing countries and Africa specifically, focusing particularly on how energy and electricity fit within the grand period of macroeconomic reform in the 1980s to late 1990s. It highlights what was known and unknown about models of

utility and energy reform during this period and how and why the turn to the private sector became dominant. This is not a rehashing of the old stories about structural adjustment and privatization; these issues certainly materialize, but what is emphasized is the disconnect that emerged between the theory of ideal reform versus the reality on the ground. Chapter 4 examines the contemporary politics of Uganda's energy sector, including its challenges. Here, the book emphasizes the conflict and tension between sector reform and dam construction and how this conflict helped, in conjunction with dramatic changes in global financial resources, the delays in the execution of the Bujagali dam. Chapter 5 concludes the book. Here, the prologue of Uganda's energy challenges are explained and placed in regional and continental context. The chapter highlights broader lessons from Uganda's reform experience but also notes how the country has rebounded from its crisis, particularly by turning to new 'development partners' like China, which is the lead builder of two new dams in the country, and turning inward to self-finance its own energy trajectory. This new trajectory, however, is examined in conjunction with a reflection on how politics and governance has evolved in parallel with this new energy trajectory. The short message is that while Uganda has taken away significant lessons for its energy sector, lessons about the political and social context that defines and is shaped by energy reforms are still wanting.