

LAD CASE STUDY

Electrifying *Power Africa*: Balancing National Principles and International Pressures

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LAD

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Introduction

Despite the support for Power Africa and its enabling legislation, the initiative lacks the necessary backbone and resources to rival other development efforts on the African continent. Whereas past presidential initiatives in Africa have increased resources for delivering services and projects, Power Africa aggregates resources from its member organizations to lower the barriers for energy projects throughout sub-Saharan Africa. At a time when China is pumping tens of billions of new loan money into sub-Saharan Africa's infrastructure, a lack of political consensus on building a budget for Power Africa has prevented the United States from competing with other powers on the continent. This case details how Power Africa, even with early momentum and seemingly strong partnerships, has yet to realize its potential. As a result, the U.S. is losing its foothold on the continent.

Background

The United States and Africa have a complicated relationship. Over the past decades, U.S. presidents have taken decisive action to help and, at times, hinder the continent's political landscape and economic growth. As a continent, Africa has seen its share of civil wars and development challenges, which some claim stem from Africa's colonial history. Despite the complicated history of the continent, there is great potential for improving quality of life and expanding business opportunities. The U.S., along with its western allies and global competitors, has recognized these opportunities and sought to build partnerships with African countries.

When President Barak Obama came to office in 2008 as the first African American president (with Kenyan roots), there were high expectations for continued strengthening of US-Africa relations. But during President Obama's first term, levels of engagement with Africa were relatively low. The administration launched the Global Health Initiative with a dedicated \$63 billion multi-agency initiative,ⁱ However, it was abandoned shortly thereafter. There seemed to be a misalignment between the U.S. priorities for the continent and those of African leaders.

Despite the amount of foreign aid flowing into the continent and America's interest in democracy, counterterrorism partnerships, and human rights issues, African leadership maintained a focus on increasing private and business investments into infrastructure. The World Bank's report on the ease of doing business reflects this need as well, ranking countries with less infrastructure investment lower in terms of business efficiency.ⁱⁱ In 2013, the majority of African countries were not producing enough energy to meet the current demand for the local population.ⁱⁱⁱ This meant that the supply could not even begin to handle

Kate Gasparro conducted interviews and prepared this case under the supervision of Francis Fukuyama of Stanford University. This case was developed solely as a basis for class discussion. It is not intended to serve as a historical record, a source of primary data, or an illustration of effective or ineffective management.

the demand for businesses looking to invest in Africa. Continuous and rolling blackouts throughout the continent highlighted the gap between energy supply and demand.^{iv} Further, U.S. embassies throughout the continent were relying on generators to power their daily operations, sometimes resulting in thousands of dollars of expenses.^v

In the months leading up to President Obama's visit to Senegal, South Africa, and Tanzania in 2013, several groups, agencies, and members of Congress worked on frameworks for an energy initiative in Africa. These groups understood the scale of energy poverty on the continent and the political momentum in Africa for collaboration on infrastructure delivery. It was estimated that two out of every three people in sub-Saharan Africa lacked access to power. On June 27, 2013, Representative Royce (the ranking Republican on the House Foreign Affairs Committee) presented the Electrify Africa Act.^{vi} And, with congressional momentum, Obama announced his Power Africa initiative at the University of Cape Town three days later.^{vii} The Electrify Africa Act, as well as the Power Africa initiative, received bipartisan support because of their common missions to catalyze private investment in Africa, rather than relying on public aid dollars, to build stronger relationships in Africa, protect national interests, and increase American jobs overseas.

Power Africa

When Power Africa was first announced in 2013, President Obama promised a \$7 billion investment of U.S. government resources and \$9 billion investment from the private sector towards energy projects in sub-Saharan Africa.^{vii} The original goal of the initiative was to provide 10,000 MW of power and 20 million new household connections within 5 years.^{viii} In August of 2014, at the U.S.-Africa Leaders Summit in Washington, D.C., President Obama established a new goal for Power Africa: to “enable electricity access by adding 60 million new energy connections [and] 30,000 megawatts (MW) of new and cleaner power generation” by 2030.ⁱⁱⁱ This goal, which triples the original Power Africa goal, came on the heels of a private sector commitment to develop over 14,000 MW of energy generation projects.^{ix} Despite the interest and lofty goals for Power Africa, it cannot rival other efforts on the continent. Instead of setting aside a hefty budget line for delivering energy infrastructure in the country, the initiative focuses on lowering the barriers for investment in and construction of energy infrastructure. From the beginning, this initiative was crafted so that it did not require a budget and could quickly get support and approval from a divided U.S. Congress. Without political consensus, Power Africa could not become an initiative for building energy infrastructure. Instead, Power Africa became an umbrella organization that enabled collaboration among its member organizations. Instead of using the aggregated resources to build infrastructure in a few locations, Power Africa used those resources to build capacity for many different governments in Africa, maintaining a wide reach on the continent.

Congressional Support: Electrify Africa Act

Congressional momentum behind the Electrify Africa Act began with a bipartisan trip to Africa to evaluate the status of the African Growth and Opportunity Act (AGOA)^x and its impending expiration. A congressional delegation, led by Representative Ed Royce's staff, visited sub-Saharan Africa to discuss the success of AGOA. During that visit, the delegation

found that different countries were using AGOA at various levels. The differentiating factor was access to electricity. It became evident that without electricity, capacity for trade was very low. In the months following the trip, congressional staff on both sides of the aisle worked together to draft the Electrify Africa Act and introduce it a week before President Obama announced Power Africa in June 2013. Prior to introducing the bill in 2013, the staff shared drafts with the White House and agreed to make changes, aligning it with a similar initiative being crafted by the President's staff. While the legwork was done in 2013, the bill was not passed until December 2015, and the final language was signed into law in 2016. In working with the White House staff during this process, congressional staff worded the Act so that it would serve as complementary legislation to the Power Africa initiative. As such, the Act called for the installation of 20,000 MW and 50 million connections in Africa by 2020.

When the Electrify Africa Act of 2014 was first introduced as H.R. 2548, the bill gave directive to the U.S. Agency for International Development (USAID) to prioritize loan guarantees for African power projects and consider grants to develop energy and electricity policy plans. After a year of review and amendments, H.R. 2548 passed with a majority of 297 to 117 with bipartisan support on May 8, 2014.^{vi} Although the bill was then forwarded to the Senate for approval, the congressional term ended before any further action could take place.^{xi} Therefore, on June 23, 2015, Representative Ed Royce proposed H.R. 2847: the Electrify Africa Act of 2015, presenting a new version of the bill that urged the President to “(1) establish an interagency working group to coordinate the activities of U.S. government departments and agencies involved in carrying out the strategy, and (2) use U.S. influence to leverage international support to promote the strategy.”^{xii} Although USAID was not responsible for the undertaking of the bill's lofty goals, USAID, in addition to the Trade and Development Agency, Overseas Private Investment Corporation (OPIC), and the Millennium Challenge Corporation were called upon to prioritize sub-Saharan Africa power projects. This bill also included language to extend OPIC's issuing authority through September 30, 2018, by amending the Foreign Assistance Act of 1961. A parallel bill, S. 1933, was introduced by Senator Bob Corker on August 4, 2015.^{xiii} After review by the Committee on Foreign Relations, a new bill, S. 2152: Electrify Africa Act of 2015, was introduced on October 7, 2015, by Senator Bob Corker. The bill differed from its predecessors by removing any language that regarded extending OPIC's issuing power and amending the Foreign Assistance Act of 1961.^{xiv} In December 2015, the Senate passed the bill with unanimous consent and it was then forwarded to the House. The House passed the bill by voice vote on February 1, 2016, and President Obama signed the bill into law one week later.

Public Law 114-121: the Electrify Africa Act “establish[es] a comprehensive United States Government policy to encourage the efforts of countries in sub-Saharan Africa to develop an appropriate mix of power solutions, including renewable energy, for more broadly distributed electricity access in order to support poverty reduction, promote development outcomes, and drive economic growth, and for other purposes” and retains its initial goal of promoting first-time access to power for 50 million and 20,000 MW of new installations.^{xv} The Electrify Africa Act, in all its forms, received bipartisan support with no fewer than 22 cosponsors in the Senate and 53 cosponsors in the House. Yet despite its support and lofty goals, the bill does not stipulate any budgetary action or reallocations of resources to achieve its goals. Subsequently, the Act does not include any accountability measures or a plan for reaching

20,000 MW. Despite these challenges, the Act allows the initiative to be flexible and to take an all-of-the-above strategy with a focus on market-based solutions.

While the final CBO assessment showed no additional government outlays, the previous Electrify Africa Act of 2014 (with its OPIC provisions) warranted a different CBO assessment. It was estimated that the United States would receive a net \$86 million between 2014 and 2019. These calculations were based on the lower default rates and higher fees used by OPIC's loan programs.^{xvi} But because of the effort to win support from small government supporters and expedite the passage of the bill within both houses, the bill that was passed did not include reauthorization of OPIC. The CBO estimated that the direct costs of the final version of the Act would stem from developing a comprehensive strategy and reports to Congress, which could amount to \$1 million of spending between 2016 and 2020. In terms of infrastructure investment, the Act would not increase net direct spending or on-budget deficits, asking specific agencies to prioritize loans, grants, and support towards these projects.^{xvii} The CBO's analysis was favorable because no federal government outlays were directed or allocated within the Act.

Structure

Both Power Africa and the Electrify Africa Act had similar intentions: expand electricity generation and distribution in Africa. Power Africa identified six initial partner countries (Ethiopia, Ghana, Kenya, Liberia, Nigeria, and Tanzania) to concentrate efforts and install 10,000 MW and 20 million new connections.^{xviii} In pursuing projects in these countries, Power Africa identified 12 U.S. public agencies, nearly 40 private partners, and 10 development partners (see table in Appendix) to work together with African governments to deliver energy projects. Andrew Herscowitz, as the appointed Power Africa Coordinator, maintains a post within the United States Agency for International Development (USAID) and oversees the interagency Power Africa Working Group (PAWG), which is co-led with the National Security Council. The PAWG is responsible for guiding the mission of Power Africa and includes all 12 U.S. public agencies.^{xix} As Power Africa Coordinator, Herscowitz is the point-person responsible for coordinating the various agencies and ensuring that the Power Africa mission stays on track to achieve its goals by 2030. The Electrify Africa Act did not offer any additional resources for Power Africa administrators and partners. Therefore, the creation and sustained operations of Power Africa are the result of pooling funds from within USAID. With this structure, Power Africa, with Herscowitz's leadership and a coordinating office within USAID, encompasses all energy projects being developed by U.S. departments and agencies, regardless of the scope of work or whether the project was planned prior to the introduction of the initiative.

A large part of the Power Africa structure, also exemplified in the Electrify Africa Act, is the use of public-private partnerships to deliver projects in sub-Saharan Africa. In an effort to lower political, regulatory, and technical risks, transaction advisors from the 12 U.S. public agencies serve an integral role in expediting these investments and facilitating private investments. This type of U.S. government support has encouraged private sector partners to commit billions of dollars of investments in energy projects in sub-Saharan Africa. For example, Heirs Holdings, as of 2014, committed \$2.5 billion of investment and financing for energy projects within a five-year time frame. And Aldwych International agreed to unleash \$1.1 billion to develop wind power. At the same time, GE committed to developing 5,000 MW of energy in Tanzania and Ghana.^{xx}

Power Africa's focus on enabling private investment in Africa is a stark contrast to other initiatives on the African continent. At the time Power Africa was announced and the Electrify Africa Act was going through Congress, China was starting to be a more active player on the African continent, increasing trade and investment in sub-Saharan Africa. The White House and congressional staff knew that Power Africa could not rival the financial muscle of the Chinese strategy. Instead, they decided to model Power Africa to leverage the United States' best assets and offer an alternative to the Chinese model. While the Chinese model involves huge loans for large development projects that increase a country's debt levels, the Power Africa model reduces barriers for private U.S. investors to finance projects off the country's "books." This public-private partnership model is the first of its kind. Instead of replicating the Chinese model, the U.S. is working to enable private investment without a focus on granting or loaning development dollars.

Components

While Power Africa has been influential in greenfield project delivery, the majority of its work and strength comes from increasing capacity for projects already under development. The different components of Power Africa help provide a multifaceted approach to energy infrastructure delivery. This approach looks across countries to facilitate new and older projects from a mix of generation sources, from fossil fuel to renewable energy. Power Africa focuses on lowering the barriers for project delivery, not on direct project construction. Therefore, one arm of Power Africa looks at pre-development financing to bring projects that are in the early stages of development to market, while another arm provides long-term funding for project structuring, negotiation, and construction (see table in the Appendix). This support facilitates the delivery of large energy projects that require tremendous financial support, face technical and logistical hurdles, and include many stakeholders. Often, it is these large projects that fall behind schedule and exceed their budgets due to friction between stakeholders and uncertainty during design and construction.

The purpose of Power Africa's multifaceted approach is to build capacity and assist with transactions for projects already under development. Within this scope, Power Africa agencies are also involved with improving and streamlining regulatory policy and governance objectives. These improvements will assist countries in attracting private investment. In the past, private investors have been hesitant to invest in Africa because of policy and regulatory issues. For example, countries sometimes selected companies to perform government contracts because of political ties, rather than the quality or capacity of the company to carry out a government contract.

Even though large energy projects often attract more partnerships and support, Power Africa also provides support for projects with local and regional impact. The Beyond the Grid initiative is focused on developing small-scale and off-grid solutions that will enable 20 million new connections, 1/3 of the total connection goal.^{ix} Within the Beyond the Grid initiative, Power Africa architects have created or incorporated additional initiatives as incentive to entrepreneurs and local developers to pursue electrification solutions. For example, the Off-Grid Challenge presented \$2M (in \$100k grant segments) to facilitate groups like the Green Village Energy Group that focuses on developing 6 KW systems in rural communities in Nigeria, and Afrisol Energy, a company that uses bio-digesters to produce electricity for small businesses and a school in Nairobi. The US-Africa Clean Energy Finance Initiative dedicated \$20 million for innovative energy solutions. This initiative

included Off-Grid Electric Tanzania Ltd., which provides pay-as-you-go solar home systems in rural Tanzania, Husk Power Services, which has developed 250 biomass mini-grid facilities in Tanzania, and D.light, which has produced and distributed solar lighting and power products that can be used in the household.^{ix}

Power Africa Projects

Due to Power Africa's multifaceted approach, the initiative has been able to build a diverse portfolio of energy projects throughout the continent. As an umbrella organization, Power Africa's portfolio includes all projects that have been worked on by its member organizations. This distributed structure has allowed Power Africa to capitalize on the diversity of infrastructure delivery in each country and provide custom solutions for each project and political landscape. Although Africa is home to the highest concentration of poor countries, the countries are heterogeneous, with their individual strengths, weaknesses, and processes for delivering infrastructure. Because infrastructure delivery can range from 5 to 10 years (frequently impacted by political timelines and transitions), Power Africa's continued and individualized support is capable of facilitating all types of projects. As a result of the multifaceted approach, Power Africa is tracking nearly 430 transactions in 31 countries with nearly 4,600 MW of installation.ⁱⁱⁱ In the years since launching of the initiative, Power Africa has overseen financial closure of 88 transactions and 7,402 megawatts. These numbers do not translate into the actual megawatts constructed or even the number of people who have access to energy. Instead, this measurement of success was chosen to reflect the number of projects that have overcome the challenges of the procurement process and await construction.

Sub-Saharan Africa is comprised of a diverse set of countries, each with its own political system and institutional structure. Navigating policies and institutions related to energy infrastructure procurement can prove difficult for any outside agency. In pursuing its mission to reduce barriers for private investment in energy infrastructure, the U.S. has faced many challenges. Many of these challenges come during the procurement process when the contractual terms are determined and the companies that will construct the project are selected. During this period, project risks must be assessed and priced. This is a difficult task: an evolving energy technology market might offer cheaper options in the future, political systems may shift over the lifecycle of the project, and land and property rights might impede project delivery. Further, as more projects fall under the Power Africa umbrella there is a greater attempt to create more transparent processes (often in contradiction to opaque negotiation processes that have been used in the past) and the use of social and environmental safeguards for project delivery, including a means to grow capacity for African labor.

The following paragraphs detail the development of three different projects and how they have been influential in energy generation in sub-Saharan African. While the projects are marked with the stamp of approval from the Power Africa initiative, they sometimes began many years before the Power Africa initiative was announced. Additionally, these projects might not include financing deals with U.S. agencies. Nevertheless, Power Africa's stamp of approval and transaction support sends a strong signal to other potential investors and project partners about project viability. Further, because Congress did not allocate additional resources (and therefore oversight) to Power Africa, these projects highlight the challenges

faced by the initiative. The Corbetti project reflects the need for appropriate regulatory environments for new types of infrastructure development, the Cenpower project is an example of uncertain timelines due to the need for creating new policies, and the Lake Turkana project describes a project that has been delayed due to mixed support from U.S. agencies.

Corbetti Geothermal Project

One project that has stood out within the Power Africa portfolio is the Corbetti Geothermal project in Ethiopia. The project is the product of a partnership between Corbetti Geothermal and Ethiopian Electric Power, first discussed in 2012.^{xxi} The project, in its complete state, will generate 1,000 MW, increase energy capacity by 50% in Ghana and will require a \$4 billion investment.^{ix} The project was originally started by Reykavik Geothermal and is now being driven by Investment Firm Berkley Energy and its African Renewable Energy Fund. In the agreement between Corbetti Geothermal and Ethiopian Electric Power, Corbetti Geothermal committed to selling one KWh for 7.7 cents to Ethiopian Electric Power.^{xxi} With Power Africa's help, the Government of Ethiopia received international legal advisory services which facilitated the project's financing strategy. This was important because the Corbetti Geothermal project constituted the first private sector investment in energy in Ethiopia. Despite advisory help from Power Africa, the project was supposed to start drilling in December 2016, but the schedule was delayed due to policy issues. As the first geothermal project in Ethiopia, there were no policies regarding the development of geothermal energy infrastructure. Instead, Corbetti Geothermal used mining policies to proceed with design and construction.^{xxi} This dispute between Corbetti Geothermal and the Ministry of Finance and Economic Cooperation included issues such as ownership of minerals that might be in the drilling zone. The original plan called for the first phase of the project (which will include three wells and two 5 MW well-head turbines) to be completed in 2017 and four phases of the project (with a generation capacity of 500 MW) to be completed in 2020.^{xxii}

Prior to signing the final implement agreement, Corbetti Geothermal constructed ancillary infrastructure assets, such as access roads, water pipelines, and basic infrastructure. These assets have been adopted by nearby communities. In the process of project development, Corbetti Geothermal has also provided community development projects including clean drinking water, health centers, and agricultural job training.^{xxii}

Cenpower

Cenpower, first incorporated in 2003, will be a 340 MW thermal generation plant in Ghana designed to serve 700,000 households.^{ix} In the first two years of incorporation, studies of feasibility, site selection, preliminary engineering, and environmental impact were completed. But due to the extended planning and preconstruction period, it wasn't until June 2012 that the power purchase agreement was signed between Cenpower and the Electricity Company of Ghana.^{xxiii} In the years after the agreement was signed, Power Africa advisors worked with the Government of Ghana to develop the Gas Action Plan, documenting existing and future energy infrastructure assets.^{xxiv} In 2014, the engineering procurement and construction contract was signed with Group Five. Shortly thereafter, the project was brought to financial close and the Notice to Proceed was published. Cenpower has been financed primarily via African entities, with "67% of equity held by African entities and 83% of senior debt issued by African lenders".^{xxiii} The project is a collaboration with the Ministry of Energy, Public Utilities Regulatory Commission, Energy Commission, and Environmental

Protection Agency. The final product will generate 10% of Ghana's total energy output, constitute 20% of the available thermal generation capacity in Ghana^{xxv}, and create more than 600 temporary and 200 permanent jobs.^{xxiii}

Lake Turkana Wind Power

The Lake Turkana Wind Power project in Kenya has become the largest wind project in Africa and can generate 310 MW for 1 million Kenyan homes.^{ix} In doing so, the project will reduce up to 736,615 tons of CO² per year.^{xxvi} The project consists of 365 turbines on a 40,000 acre farm site. All turbines were manufactured in China and transported from the port of Mombasa, 1200 km away from the project site.^{xxvii} In 2005, discussions between project proponents and the Government of Kenya began; a year later the LTWP (the special purpose vehicle) was created. LTWP is comprised of a pair of developers and a host of financiers, including OPIC. Lake Turkana was one of the projects brought to financial close by the Government of Kenya with the help of Power Africa advisors. The MOU between LTWP and Kenya Power stipulates that LTWP will sell electricity to Kenya Power for 20 years at Sh8.6 per KWh.^{xxviii}

Even though OPIC and other financiers have pledged support to the project, the World Bank withdrew its support in 2012, asserting that the project's supply far exceeded the energy demand of the served area.^{xxix} But this snag in the financing strategy did not derail the project. In total, the project will cost \$6.8 billion and was completely installed in March 2017.^{xxx} Despite successful installation of all 365 turbines, the transmission lines from Lake Turkana to the sub-station near Nairobi have not been completed by Kenya Electricity Transmission Company. The delay in constructing the transmission lines has been the result of compensation disputes with communities along the line. To facilitate these types of connections, Power Africa has since provided substantial support to the Government of Kenya via the Grid Management Support program.^{xxxi} Recent news reports claim that the project is set to be connected to the national grid by the end of 2018.^{xxxii}

Challenges

Critics have been eager to claim that Power Africa is not reaching its goals in a timely manner, pointing out that less than 5% of the promised 30,000 MW of electricity had been realized by the end of 2016.^{xxxiii} Proponents of the initiative acknowledge the slow beginnings of the program and refer back to Power Africa's intentions of building capacity to explain why more projects have not come on line.^{xxxiv} The following sections explore the challenges that Power Africa faces on the way to achieving 30,000 MW and 60 million connections by 2030.

Under-Resourced and Disempowered

Presidential initiatives are usually announced with a lot of fanfare, unrealistic goals, and handshaking with powerful stakeholders. But at its core, a presidential initiative is a statement by the president's administration intended to rally multiple agencies around a common goal, delegate roles and responsibilities to these agencies, establish metrics to measure the initiative's success, and provide a point-person within the White House with budgetary authority to achieve the goals of the initiative. With an initiative as large as Power

Africa, these elements are essential for success. However, Power Africa's slow takeoff can be mostly attributed to the initiative's lack of structure and power.

As compared to Power Africa, Bush's Africa initiative, the President's Emergency Plan for AIDS Relief (PEPFAR), has received more widespread support and acclaim for "saving millions of lives" by provision of treatment for HIV/AIDS patients and funds for abstinence-focused prevention.^{xxx} Although both programs are presidential initiatives in Africa, their structure and focus have been very different. Power Africa's goal of expanding energy depends on intricate governance structures, complex processes, and access to large amounts of capital and resources to provide 60 million new energy connections. PEPFAR's mission to provide anti-retroviral drugs to 2 million was dependent upon a decentralized process that could more easily navigate the political climate by employing NGOs and other third party actors.

These two initiatives differed not only in mission and goal, but also in structure. The point-person for PEPFAR was within the White House and had the President's ear. The point-person for Power Africa is located within the bureaucracy of USAID, without a direct line to the President and without budgetary muscle. The complicated and long process of delivering infrastructure projects in Africa requires an extraordinary amount of coordination among multiple agencies, each with its own set of tools and expertise. With such high coordination costs, Power Africa cannot succeed without the structured benefits of a typical presidential initiative. One expert commented that PEPFAR and the Millennium Challenge Corporation were successful because they had "strong institutional homes, clear value-added, metrics of success, and bipartisan support."^{xxxii} Power Africa's structure depends upon coordination between 12 public agencies. This brings "a high risk of confusion, incoherence, and infighting"^{xi} due to different mandates and objectives. Power Africa works to overcome these differences by assigning liaisons within each agency (and in some cases, in parallel positions in the U.S. and in Africa), leading it to be one of the better interagency collaborations. In blending and aggregating so many agencies through this initiative, inevitable friction has led to challenges for Power Africa projects. Two organizations have struggled to realize their own potential because of political processes in the United States.

OPIC's Weak Position

In the process of passing the Electrify Africa Act, several reforms were removed from the legislation to insure its passage in both the House and Senate. The original Electrify Africa Act called for Overseas Private Investment Corporation (OPIC) reauthorization and reforms. In the design for the Power Africa initiative, OPIC would play a large role in investing U.S. dollars in projects in Africa. And the initial reforms included in the bill sought to streamline and make the process of project approval and investment more transparent. These reforms included "(1) simplifying the approval process for smaller energy projects (2) allowing for local currency guarantees to facilitate local lending, (3) requiring that OPIC publicly disclose detailed information on all of its sponsored projects (4) making OPIC's Board of Directors bipartisan."^{xi} Without these reforms, OPIC has lacked certain tools for addressing project challenges and circumventing political prioritization.

Controversy Over ExIm Bank's Role

Early on, the United States ExIm Bank committed \$5 billion in total financing for Power Africa.^{xx} This comprised the majority of the public sector commitment to Power Africa

initiatives. However, within the first three years of Power Africa, the ExIm bank only supported one project of 100 MW in South Africa. During that time period, the U.S. Congress debated the purpose and existence of the ExIm Bank, creating an uncertain future for the organization. Opponents argued that the ExIm Bank supported politically favorable companies, while advocates of the ExIm Bank “insisted that in the face of global competition, the bank’s support is needed to sustain American businesses and jobs.”^{xxxiii} The debate over the role and existence of the ExIm Bank led to expiration of the Bank’s authorization in June 2015. Since 2015, there has not been a board quorum to approve transactions above \$10 million, further hindering involvement in the Power Africa initiative.¹

Lack of Systems-Wide Planning

Power Africa was established to provide tools and resources/capacity to help deliver already identified projects. But because the purpose of Power Africa is to address the challenges faced by each individual project, there is limited (if any) systems planning to help these projects integrate with a large energy distribution and transmission system. For example, the Lake Turkana Wind Project, delivered in March 2017, has not come on line.^{xxxiv} The project was successful in that it was innovative, the first of its type and scale in Africa, but the project team was working alone, without an eye to the rest of the energy infrastructure in the country. Therefore, when the project became operational and capable of generating power, there were no transmission lines to connect the wind farm to the energy distribution system. Without a systemic perspective, it is difficult for Power Africa to recognize synergies between different infrastructure assets and leverage projects to increase the energy output of the project portfolio.

Weak Prior Investment

Other countries have been faster to act in Africa, recognizing the vastly under-tapped potential of the continent. China’s portfolio of infrastructure development has far exceeded that of the U.S. Since 1994, China has signed investment treaties with 24 African countries (a market size that captures more than 80% of SSA’s GDP), while the U.S. has only signed 2 investment treaties.^{xxxv} In the time that the ExIm Bank has been unable to invest in African energy projects, China (as well as other Asian and European countries) has been approached by special purpose vehicles and others hoping to reach financial close on many of these hallmark energy projects. This means that the U.S. has had less opportunity and momentum to invest in energy projects. As a result, China’s investment in energy infrastructure in Africa reached over \$16.3 billion between 2000 and 2012 (Europe reached over \$6.9 billion), while the U.S. has invested only \$482 million within the same time frame.^{xxxvi}

Looking Forward

Despite the slow momentum to complete projects that will achieve Power Africa’s mission, legislation that was passed and signed by Obama in February 2016 will ensure that Power Africa continues to sustain itself with U.S. investment. But the challenges described earlier still remain. These challenges, especially Power Africa’s lack of resources and disempowerment, will continue to threaten the future of the initiative. For Power Africa to achieve its mission of connecting 60 million people in Africa, continuing support for the program is essential.

Appendices

Table 1: Power Africa Partners

Public Agencies	Export-Import Bank of the US, Millennium Challenge Corporation, Overseas Private Investment Corporation, USAID, US Trade and Development Agency, US African Development Foundation, US Army Corps of Engineers, US Department of Ag, US Department of Commerce, US Department of Energy, US Department of State, and US Department of Treasury
Private Companies	Aelous Kenya Ltd., AFCorp Investments, Africa Finance Corporation, Africa Infrastructure Investment Managers, Aldwych International, American Capital Energy & Infrastructure, APR Energy, Black Rhino Group, Corporate Council on Africa, Denham Capital Management, dVentus Technologies, EA Power, EGG Energy, General Electric, Geothermal Energy Association, GG Energy Holdings, Goldman Sachs, Harith, Hecate Energy, Heirs Holdings, Husk Power Systems, IAP Worldwide Services, Industry Capital, Initiative for Global Development, KMR Infrastructure, National Rural Electric Cooperative Association, Nedbank Capital, NextGen Solar, Nigeria Solar Capital Partners, Orchid Business Group, Ormat Technologies, Standard Bank Group, Standard Chartered, Sun Edison, Symbion Power, The Abraaj Group, U.S. Energy Association, United Bank for Africa, Viability Africa
Development Partners	African Development Bank (AfDB), the World Bank Group (WBG), the European Union (EU), the Governments of Canada, Norway, Sweden, and the United Kingdom, the U.N.'s SE4ALL initiative, the AU's NEPAD Agency, the International Renewable Energy Agency

Table 2: Power Africa Components

	Start Up	Active Development	Project Structuring and Negotiation	Construction
Funding Amount	\$100k-\$1MM	\$500k-\$2MM	\$2MM-\$25MM	\$10MM-\$1BB+
Funder Type	Angel Investors, Grants (e.g. SEFA)	Bilateral Funds (Public), Well-Capitalized Experienced Developers	Equity Investors including PE Funds, Development Institution Loans	Equity Investors including PE Funds, Bank Loans (Private/Multilateral)
Risk Level	Very High Risk	High Risk	Moderate Risk	Lower Risk
Projects Funded	Pre-feasibility, Project Preparation, Technical Assistance, Grants, Technical Assistance, Training	Feasibility, Project Preparation and Technical Assistance Grants, Transaction Advisory	Transaction Advisory, Loan Guarantees, Working Capital Loans for U.S. Exporters, Direct Loans, Risk Mitigation Insurance, Assistance in Negotiation of Power Purchase Agreements, Targeted Advocacy,	Loan Guarantees, Risk Mitigation Insurance, Working Capital Loans for U.S. Exporters, Medium Term and Long Term Direct Loans

			Support for Legal, Regulatory, and Institutional Reforms	
Agencies	USAID, USTDA, DOE, USADF, ACEF	USAID, USTDA, USADF, ACEF	USAID, OPIC, EX-IM, MCC, USTDA, DOS, DOE, DOC, Treasury	OPIC, EX-IM, USAID

Text of Public Law 114-121: Electrify Africa Act of 2015

<https://www.congress.gov/114/plaws/publ121/PLAW-114publ121.htm>

Endnotes

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