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"The Future of Energy in Africa"

Chairman Smith, Ranking Member Bass, and Members of the Subcommittee, thank you for the opportunity to appear before you today.

USAID partners to end extreme poverty and promote resilient, democratic societies while advancing our security and prosperity. Through USAID's new model for development, we are investing in Africa's greatest resource—its people—to sustain and further development, opportunity, and human rights for this and future generations.

President Obama's Power Africa initiative and the leadership of Congress, including Members of this Subcommittee, highlight the extent to which we are all united in aggressively addressing one of the core obstacles to the continent's development. The lack of electricity access has long hobbled Africa's opportunities for durable growth and prosperity. Without a dependable supply of electricity and an enabling policy environment, the private sector will not invest significantly in African economies; and without private sector investment, local economies and entrepreneurs cannot thrive.

Of the 1.2 billion people in the world who have no access to electricity, about half live in sub-Saharan Africa. Yet the region has tremendous untapped sources for sustainable energy generation. Solar, wind, and hydro power resources alone have the potential to meet a large proportion of the continent's energy needs. In addition, East Africa's Rift Valley holds an estimated 15,000 MW of geothermal energy resources, while Tanzania's and Mozambique's proven natural gas reserves are over 100 trillion cubic feet—the equivalent of enough gas to power nearly 100 million U.S. households for 15 years.

Tapping into plentiful, sustainable resources and introducing new energy technologies will advance efforts to mitigate the effects of climate change, and promote economic development and job creation, which in turn can improve quality of life.

Power Africa is helping to make that happen by putting this new model for development into action. In the 16 months since its launch, Power Africa's partnerships with African governments,

private investors, other donors, and developers have already begun to bring benefits to the people of Africa and the United States. Power Africa, which is coordinated by USAID and the White House, uses private sector engagements to identify the most critical policy and institutional reform issues standing in the way of electricity generation and access projects. As such, Power Africa does not seek to use American taxpayer money to pay for the construction of large infrastructure; rather, it uses modest amount of funds to facilitate and advance power projects by structuring investment opportunities and opening new markets to companies—from small businesses to multinational corporations.

To date, more than 80 private sector partners have committed to invest over $20 billion in power sector development. Power Africa has already helped to financially close deals that will generate more than 3,000 MW, which has the potential to provide power for more than 5 million African homes, service providers, and businesses. Power Africa is currently considering facilitation of projects expected to generate an additional 15,000 MW of generation capacity.

Our work with the Nigerian Government is among Power Africa's most significant accomplishments of the past year. Although its population is estimated at more than 170 million, Nigeria generates less than 4,000 MW of electricity annually. With legal, financial, and technical support from Power Africa, the Government of Nigeria successfully privatized five generation and ten distribution companies in 2013. As part of their privatization agreements, the generation companies are contractually obligated to increase generation for each plant over the next five years to reach a national total of 6,000 MW of installed capacity. Investments by new independent power producers are estimated to produce another 2,000 MW. Our next body of work is related to the Niger Delta Power Holding Company commencing the privatization of ten generation plants completed or in the final stages of completion under the National Integrated Power Project (NIPP); these are expected to generate another 5,445 MW. This process is stalled, however, due to a lack of access to natural gas, and the investors will not commit the initial payment for the plants until the Government of Nigeria has resolved the issue. To overcome the impasse, Power Africa plans to collaborate with the private sector on a gas strategy for the NIPP projects.

The Overseas Private Investment Corporation (OPIC) has already committed $410 million in financing and insurance to these private sector partners to develop African power projects. OPIC commitments include insurance and $50 million in financing to help construct and operate the massive Azura-Edo power plant in Nigeria, as well as insurance and $250 million in financing to the Lake Turkana wind farm in northern Kenya, which will become the continent's largest wind project when complete. This model of leveraging private investors to lead the way in energy development is at the heart of the Power Africa effort.

OPIC, the Department of State, and the U.S. Trade and Development Agency (USTDA) have also partnered to carry out the U.S.-Africa Clean Energy Finance Initiative, an innovative program to support early-stage renewable energy projects and catalyze private-sector investment in the African renewable energy sector. Game-changing clean power projects that have progressed because of these funds include a Senegalese wind farm which upon completion is expected to provide 150 megawatts of renewable power and a pioneering company that is installing and maintaining thousands of home solar kits across northern Tanzania.

Power Africa's successes extend to U.S. companies as well. To demonstrate the effectiveness of U.S. smart grid technologies, USTDA sponsored a reverse trade mission to the United States for decision-makers from Nigeria's recently privatized distribution companies in November 2013. This reverse trade mission addressed—and targeted U.S. export content for—over $800 million in investments needed in Nigeria, where electricity grids often lose over 40 percent of the power they transmit. The delegates were seeking goods and services that could aid them in their efforts to reduce these losses by more than half over the next five years. As a direct result of these meetings, Itron, a company based in Liberty Lake, WA, recently sold commercial and industry electricity meters to Nigerian distribution utilities. The value of these initial deals is $378,000, and another order worth $2,637,000 is pending. And USTDA is sponsoring follow-on activities to help three of the distribution companies develop comprehensive plans to modernize their networks, which are expected to lead to additional sales for U.S. firms.

The delegates also expressed a strong desire for commercial partnerships with the United States and detailed their countries' efforts to foster better business environments for U.S. companies. U.S. industry participants reported that the visits provided valuable networking opportunities that allowed them to establish new—and strengthen existing—relationships with key African decision-makers, which increases their competitiveness on the continent. USTDA is currently planning follow-on activities, including an aviation conference in South Africa in 2015, to help ensure that U.S. companies are connected to forthcoming transportation and energy projects across Africa.

Power Africa is not only about large transformative projects. Because only 18.3 percent of people living in rural communities in sub-Saharan Africa have access to electricity, compared to 55.5 percent in urban areas, Power Africa launched Beyond the Grid to facilitate investment in small-scale energy solutions. In another example, the Off-Grid Challenge – funded by GE Africa, the U.S. African Development Foundation (USADF), and USAID – is a competition that promotes innovative solutions that develop, scale-up or extend the use of proven technologies for off-grid energy. In September, USADF chose 22 winners from 300 applicants in the second round of the Challenge. These innovative ideas focus on delivering more power for agricultural and commercial activities and include 14 solar projects, six biogas generation projects, one wind turbine system and a small hydroelectricity power plant.

In another small-scale project with an outsized impact, through USAID, Power Africa is funding the procurement of power generators from local suppliers for the Ebola treatment unit at the Island Clinic in Monrovia, Liberia, and other health facilities. The generators power water pumps, lights, and washing machines used to clean health workers' hospital scrubs—some of the building blocks we need to help defeat this epidemic at its source.

In order to become Power Africa focus countries, the governments of Ethiopia, Ghana, Kenya, Liberia, Nigeria, and Tanzania had to commit to undertake tough policy reforms in their energy sectors to improve their business climates, as well as make a concerted effort to attract and leverage private sector resources. Over the past six months, the U.S. government has signed memorandums of understanding with each of these initial focus countries, reflecting their strong and continued commitment to engage in policy and regulatory reform—and progress toward that goal. For instance, in Power Africa countries that are also eligible for Millennium Challenge Corporation (MCC) compacts, before the infrastructure needs are addressed through MCC grant funding, MCC works together with USAID, the State Department, and private sector actors interested in investing to jointly identify structural issues. MCC then requires its partner countries to make the tough policy reforms needed to create a viable, sustainable energy sector. This approach proved successful in Ghana when General Electric credited the compact with being a major factor in GE's plans to build a $1.5 billion, 1,000 megawatt power park and associated infrastructure. MCC's $498 million Ghana Power Compact, signed in August before Secretary Kerry and President John Dramani Mahama of Ghana, has so far been able to catalyze in excess of $4 billion of private sector commitment for the development of the energy sector.

Power Africa's work on energy also extends well beyond the six focus countries, such as through a MCC compact to improve Malawi's power sector and USAID's support of Mozambique's competitive process to tender a wind farm. In addition, OPIC and U.S. Export-Import Bank commitments to Power Africa extend throughout sub-Saharan Africa.

To bolster intra-Africa energy trade, USAID is collaborating with the World Bank Group on developing a list of priority of energy transactions for the West Africa Power Pool, such as generation and transmission from dry gas reserves in Mauritania, transmission links between West Africa Power Pool members, and solar and wind projects in Senegal. USAID is also working with other donors to develop a joint a geothermal strategy for the Rift Valley in East Africa and supporting the East Africa Power Pool, its Independent Regulatory Board, and utilities and regulators from Ethiopia, Kenya, and Tanzania to develop a model "wheeling agreement" that would govern the cost of transmitting power through Kenya.

Power Africa is also working closely with a number of East African countries along with the African Union and other donors to help tap into the region's extensive geothermal

resources. USAID recently led a 45-person delegation from East Africa to Portland, Oregon, for the Power Africa-African Union Geothermal Roadshow, where sector leaders from Djibouti, Ethiopia, Kenya, Rwanda, Tanzania, and Uganda met with U.S. Government and private sector officials to discuss potential projects that are ripe for investment and technologies that could advance those projects. Power Africa partners—including Ormat Technologies, Reykjavik Geothermal, and U.S.-based Symbion Power—were able to advance deals in countries such as Djibouti and Rwanda. The Roadshow then travelled to Reno, Nevada, where they visited Electra Therm and Ormat's Steamboat Springs Geothermal facility before returning to Washington for several days of meetings with the International Finance Corporation, the U.S. Energy Association and the private sector. Officials from the African Union Commission, African Development Bank, and the United Nations Environment Program also participated in the roadshow.

The U.S. Government will meet its initial commitment of $285 million for the Power Africa effort, and at this year's U.S.-Africa Leaders Summit, President Obama renewed our commitment to this initiative, and pledged a new funding level of $300 million in annual assistance to expand the reach of Power Africa across the continent in pursuit of a new, aggregate goal of 30,000 MW of additional capacity to Africa, increasing electricity access by at least 60 million household and business connections. The Summit was an historic gathering of more than 50 African heads of state and government, but what set this Summit apart from others was that it provided the opportunity for the leaders to meet with a vast number of American CEOs – many from Fortune 500 companies – forge relationships, and explore mutually beneficial partnerships. Other donor partners also seized the opportunity of the Summit to announce major new commitments to Power Africa:

- The World Bank Group committed $5 billion in new technical and financial support, including loans and guarantees, for energy projects in the six initial Power Africa focus countries.
- The African Development Bank (AfDB) already announced its support to advance Power Africa as an anchor partner, with an initial commitment of $3 billion in the six Power Africa focus countries. Its work focuses on energy production, transmission, and distribution infrastructure, as well as cross-border power pools and policy and regulatory reforms.
- The Swedish government committed $1 billion in grants, loans, and financial guarantees to Power Africa that will focus particularly on clean energy projects, energy efficiency, regional power pools, and access for rural and off grid populations.

Through partnerships with other donors, Power Africa expands the tools to incentivize and advance private sector investment in critical power sector activities. This engagement with other

multilateral and bilateral donors also increases Power Africa's scope and reach and creates a unified, coordinated framework among donors for encouraging political reforms.

Today, 600 million Africans do not have access to electricity. Hospitals cannot function optimally. Businesses cannot open and children cannot read after dark. Food rots before it makes it to market. But it does not have to be this way. Together with our partners in Congress, Africa, other donor nations, and private businesses, Power Africa is working to greatly increase access to reliable, cleaner energy in Africa.

Thank you Mr. Chairman, Ranking Member Bass, and Members of the Subcommittee for your leadership and support of this important effort.