Energy in Africa Promotes U.S. Economic and Security Interests

Testimony before the Senate Foreign Relations Subcommittee on
Multilateral International Development, Multilateral Institutions, and International Economic, Energy, and Environmental Policy

Dr. Todd J. Moss
Senior Fellow, Center for Global Development
Nonresident Scholar, Center for Energy Studies, Baker Institute, Rice University
November 1, 2017

Thank you Chairman Young, Ranking Member Merkley, and other members of the Subcommittee. I appreciate the opportunity to highlight how the United States can better utilize energy policy to pursue our objectives in sub-Saharan Africa, a region of growing economic and national security importance. I proudly served in the State Department under Secretary Condoleezza Rice and continue to work closely on U.S. energy and development policies as a Senior Fellow at the nonpartisan Center for Global Development and at Rice University's Baker Institute.

I have three points today and will conclude with three brief recommendations. My three main points are:

1. Helping our allies build modern energy systems directly serves U.S. economic, national security, diplomatic, and development interests.
2. Power Africa, using U.S. tools and expertise to unlock private investment in the power sector, has made a very promising start. But Power Africa must be sustained—and could be even better at little to no additional cost.
3. Small-scale distributed power is going to reach many poor people, but to grow their economies, create jobs, and meet escalating demand, African countries will still require large-scale power plants and a modern grid. In energy, big can be beautiful too.

First, helping our allies build modern energy systems directly serves U.S. economic, national security, diplomatic, and development interests. The old version of energy statecraft was the Carter Doctrine, which asserted the right to use military force to protect the flow of oil from the Middle East. Today's global energy marketplace is wholly different and requires a new approach by the United States. The fracking revolution and rise of natural gas has dramatically changed the geostrategic balance. Similarly, promoting energy access is a valuable new lever for transforming our

relationships with emerging nations in sub-Saharan Africa and promoting the full array of U.S. interests in that increasingly important region.[1]

Our own experience here in the United States shows that mass electrification can be catalytic for reducing poverty and deprivation while generating growth and prosperity. Africa is vastly underpowered today and the gaps are only going to widen. Africans already use far less energy than their income level would predict.[2] My refrigerator uses the same amount of electricity each year as nine people in Ethiopia.[3] As people grow richer, demand for energy expands as people can afford higher power appliances and move into higher-value jobs that require modern power.

All African countries aspire to what we take for granted: affordable 24/7 electricity that is mostly hidden but fundamental to the way we live, work, communicate, and travel. For African governments building modern energy systems to deliver on the ambitions of their citizens, they understandably seek active U.S. engagement to help them connect with investors and advanced technology. These ambitions are not just for lights and a phone charger, but for the modern energy infrastructure that every country needs to benefit from the global economy and to create jobs for their growing populations.

Why should the U.S. even care about Africa's unmet energy demand? The economic upside is tremendous. Data show very clearly that lack of power for African businesses is among the very top constraints to economic growth.[4] Resolving Africa's power gap would help to unleash the massive consumer and investment potential of a continent that is already home to more than a billion people and is bursting with creative and entrepreneurial talent.

Conversely, the security downside of failure is frightening. Power is absolutely essential to creating the tens of millions of new jobs that Africa needs every year. There is no scenario where Africa is stable and thriving without a rapid expansion of the power sector. It's not too strong to say that the continent will either become a source of new economic dynamism or a source of instability and threats—and that electricity will be one of the driving determinants.

A good example of the upside opportunities and the downsides risks is Nigeria, Africa's largest economy and most populous nation. Nigeria is an unavoidable American partner in our fight against nearly every transnational threat we face: terrorism, disease, criminal networks, and trafficking in drugs, guns, and people. With a population approaching 200 million, Nigeria is also a major investment and trading partner that we would be unwise to ignore.

---

[1] Bazilian, Morgan, Benjamin Sovacool, and Todd Moss. "Rethinking Energy Statecraft: United States Foreign Policy and the Changing Geopolitics of Energy." *Global Policy* 8, no. 3 (September 2017): 422-25. http://onlinelibrary.wiley.com.ccl.idm.oclc.org/doi/10.1111/1758-5899.12461/full

[2] Moss, Todd, and Gailyn Portelance. "Do African Countries Consume Less (or More) Electricity than Their Income Levels Suggest?" Center for Global Development, May 31, 2017. https://www.cgdev.org/blog/do-african-countries-consume-less-or-more-electricity-than-their-income-levels-suggest

[3] Moss, Todd, and Madeleine Gleave. "Seven Graphics that Explain Energy Poverty and How the US Can Do Much More" Center for Global Development, February 18, 2014. https://www.cgdev.org/blog/seven-graphics-explain-energy-poverty-and-how-us-can-do-much-more

[4] Ramachandran, Vijaya, Alan Gelb, and Manju Kedia Shah. *Africa's Private Sector: What's Wrong with the Business Environment and What to Do About It*. Washington, DC: Center for Global Development, 2009. https://www.cgdev.org/publication/9781933286280-africas-private-sector-whats-wrong-business-environment-and-what-do-about-it

To give you some perspective, in about 25 years, Nigeria's population will surpass the population of the United States. We currently have about 1,000 GW of electricity generation capacity in the U.S, a number that the Department of Energy expects to rise to about 1,200 GW by 2040. Today, Nigeria has 4 GW. If we help Nigeria build a modern energy system that meets its economic and human development needs, we will help a critical ally, support its path to better governance, and generate tremendous opportunities for American companies. Choosing to overlook Nigeria's energy needs leaves only two scenarios: China fills the vacuum or Nigeria disintegrates and becomes an epicenter of dangerous threats.

Second, Power Africa has made a very promising start, but must be sustained — and could be even better at little to no additional cost. The initiative, launched in 2013 in specific response to ally requests for U.S. assistance, aims to boost generation by 30 GW and to connect 60 million new homes and businesses by 2030. The effort is backed by Congress through the Electrify Africa Act, which passed in 2016 with strong bipartisan support.

So far, Power Africa is right on track to meet these goals.[5] Importantly, Power Africa has used a suite of public policy tools to convene, catalyze, and cajole private investment in the power sector. To be very clear, Power Africa is not using U.S. taxpayer funds to build power plants in foreign countries. It is instead deploying technical advisors and other tools to unlock the potential of the private sector. The limited public sector funding that is being deployed is largely from the Overseas Private Investment Corporation (OPIC), which makes commercial loans to specific high-value projects where private credit is unavailable. This does not cost U.S. taxpayers, as OPIC is profitable and returns money into the U.S. Treasury every year.

Third, small-scale distributed power solutions are going to reach many poor people, but African economies will still require large-scale power plants and a modern grid. The notion of universal energy access is a worthy goal and one that can be reached in our lifetime. If you live today without any electricity, then getting your first solar lantern or a small solar home system is a huge step up. However, there are important caveats:

- *Small solutions are just the first step on a long energy ladder.* The International Energy Agency currently considers a rural person to have "modern access" at just 50 kWh per person per year. It is what an average American consumes in a day and a half—barely enough to power a light bulb or charge a cell phone. No person will ever be satisfied with this much power, and it is absurd to call this modern energy access.[6] Expecting Africans to stay at a very low level of energy consumption is to expect them to remain in poverty.

- *Getting energy to poor people in their homes is important, but the major development benefits come from energy for industry and commerce.* In a typical economy, the vast majority of electricity is used by industry and commerce, not households. No matter how many lanterns are delivered,

[5] *Power Africa Annual Report August 2017*. Washington, DC: United States Agency for International Development, 2017. https://www.usaid.gov/sites/default/files/documents/1860/PA_FINAL_508c.PDF; Moss, Todd. "Grading Power Africa." Brief. Washington, DC: Center for Global Development, 2016. https://www.cgdev.org/publication/grading-power-africa

[6] *More Than a Lightbulb: Five Recommendations to Make Modern Energy Access Meaningful for People and Prosperity*. Report of the Energy Access Targets Working Group. Washington, DC: Center for Global Development, 2016. https://www.cgdev.org/publication/more-than-lightbulb-recommendations-modern-energy-meaningful

Africa's growing cities and industrial zones will require large-scale power for job creation and economic growth.

- *"All of the above" is not just an American approach*. Every country exploits is own endowments to meet the energy needs of its people. Solar, wind, and hydro will all play an important role in Africa's future energy mix. Yet many countries will still need to use their own natural gas as part of their energy solution. Countries already producing natural gas include Ghana, Nigeria, Kenya, Tanzania, Mozambique, Cote d'Ivoire, Republic of the Congo, Angola, and Senegal. It is untenable to expect these nations to produce natural gas and export it all to Asia or Europe while their people need power. We can either help these countries build infrastructure smartly and with modern American technology or we can cede this space to others.

Allow me to conclude briefly with three ways to make Power Africa even more effective in supporting U.S. interests—and how Congress can help.

1. The administration should vigorously embrace the goals and tools of Power Africa with the continued support and encouragement of Congress. This requires a clear statement that Power Africa will continue and that the bipartisan Electrify Africa Act will be fulfilled.
2. The modest Power Africa team based at USAID must be fully funded. Their work covers a range of technical support, data collection, and other activities that pave the way, as it should, for private investment to do the bulk of the heavy lifting. USAID requires resources to do this job.
3. OPIC could do much more with additional flexibility and capabilities. At no additional cost to American taxpayers, OPIC could easily do two or three times the volumes of power deals in Africa if Congress provided multiyear authorization, equity authority, and allowed OPIC to invest a small portion of its profits in expanding its deal teams. Even better, Congress could work with the administration to turn OPIC into the United States Development Finance Corporation (USDFC), a full-service development finance institution worthy of the United States, and built for the energy statecraft of the 21st Century.[7]

Thank you.

[7] Leo, Ben, and Todd Moss. "Bringing US Development Finance into the 21st Century: Proposal for a Self-Sustaining, Full-Service USDFC." Policy Paper. Washington, DC: Center for Global Development, 2015. https://www.cgdev.org/sites/default/files/CGD-Rethinking-US-Development-Policy-Leo-Moss-Development-Finance-Corporation.pdf