

# Policies Shaping Power Africa: Perspectives on Energy Policy for the Developed and Developing World

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## **About WISE**

The Washington Internships for Students of Engineering (WISE) program was founded in 1980 to bring students from a variety of engineering disciplines to the nation's capital to explore the public policymaking process. Over the course of the nine-week program, students work with policy and technical mentors, along with a faculty member in residence to meet with representatives from a variety of federal agencies, Congress, nonprofit organizations, law firms, and other policy stakeholders in the private sector. Ultimately, these meetings, along with additional research, provide enough information to produce recommendations on a topic that is at the intersection of technical information and public policy. These recommendations are summarized in reports like these, and in presentations open to the general public and those who aided in the students' research.

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## **About the Author**

Rebecca Ciez is a graduate student at Carnegie Mellon studying Engineering and Public Policy. Her research at CMU is focused on techno-economic analyses of energy storage technologies for incorporation into renewable energy systems, with specific focus on microgrids and distributed generation systems. Before enrolling at CMU, Rebecca graduated from Columbia University in 2013 with a Bachelors of Science degree in Mechanical Engineering, with Economics and Sustainable Engineering minors. In addition to ASME, she is an active member of Engineers Without Borders and the Society of Women Engineers, and enjoys skiing and traveling in her free time. You can follow her on Twitter @Rebecca\_Ciez.

## Executive Summary

Sub-Saharan Africa has some of the highest rates of energy poverty in the world, despite an abundance of natural resources that can be leveraged for electricity generation. To combat these circumstances, and to spur US business involvement in Africa, President Obama announced the Power Africa Initiative in June 2013. The Initiative set targets of installing an additional **10,000 megawatts** of electricity generation capacity and expanding electricity access to an additional **20 million people by 2018** [1].

Although the program involved numerous federal agencies, it relies heavily on the ability to leverage US technologies and the private sector. This is reflected in the initial commitment of *\$7 billion* in public funds, with an additional *\$9 billion* from the private sector [1].

The private sector commitment was expanded with the announcement of the Beyond the Grid program in June 2014, which pledged an *additional \$1 billion* in private funding specifically designated for projects that are not connected to a traditional electric grid [2]. Many of the companies involved in this program utilize microgrids – a technology extensively researched through the US Department of Energy – to expand electricity access to remote areas.

While significant progress has been made towards the original goal of installing 10,000 megawatts of electricity, with deals for installing new electricity generation facilities signed for roughly  $\frac{1}{4}$  of the goal amount, it is unclear how much progress has been made towards expanding electricity access for 20 million people [3]. It is also unclear how the Initiative, which is an Obama administration directive, will continue after the end of his term. Although multiple policy options were considered in this analysis, the recommended policies are as follows:

- **Congress should enact legislation to authorize the Power Africa Initiative goals through 2018.** There are two pieces of pending legislation, the *Electrify Africa Act* and the *Energize Africa Act*, that accomplish this, while extending the deadline and increasing the targets to install 20,000 megawatts of electricity and provide access for 50 million people [4,5].
- **USAID should create a publicly accessible Power Africa project database.** Such a database would enable both the public and private sectors to identify successful technologies and measure impact both in terms of increased electricity generation and number of people who benefit.
- **If Congress fails to pass authorizing legislation, President Obama should create an African Power Advisory committee by Executive Order.** Such a committee would bring private sector expertise and best practices to the program, and could be re-charted under the next administration.

## References

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