

Scaling Micro-grid Deployment in Sub-Saharan Africa: Spotlight on the Role of Batteries

26 September 2019

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Agenda

1

Welcome &
Introductory
Remarks

2

Overview of the
Clean Energy
Solutions Center

- Kamyria Coney, Clean Energy Solutions Center

3

Presentations

- **Eric Lockhart**, National Renewable Energy Laboratory
- **Ayomide Fatunde**, PowerGen Renewable Energy
- **Elisha Chesir**, PowerGen Renewable Energy
- **Matthew Alcock**, Standard Microgrid

4

Question and
Answer Session

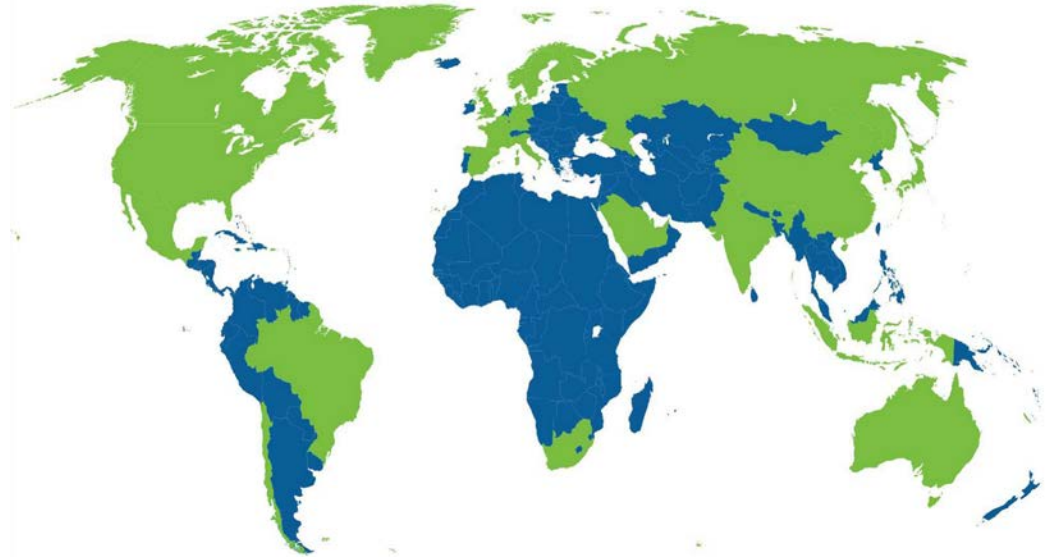
Clean Energy Ministerial

The Solutions Center:

- Launched under the Clean Energy Ministerial (CEM) in 2011

Clean Energy Ministerial:

- A high-level global forum to promote policies and programs that advance clean energy technology, to share lessons learned and best practices, and to encourage the transition to a global clean energy economy.



90%
of
Clean energy
investment

&

75%
of
Global CO₂
emissions

Solutions Center: Background & Vision

- Multilateral initiative, of the Clean Energy Ministerial, is co-led by the Australian Department of the Environment and Energy, and the U.S. Department of Energy.
- Additional funding from Power Africa & the Hewlett Foundation
- The Solutions Center is a unique CEM initiative assisting countries in all regions of the world in strengthening clean energy policies and finance measures
- Supporting transition of clean energy markets and technologies



Solutions Center: Goals and Audience

Programs and Services

- **Team of 50+ experts from around the globe responded to 350+ requests for policy support from more than 80 countries**
 - Extensive support across Africa, Asia, and LAC
 - Launched support for finance measures in 2015
- **Trained over 15,000 officials through more than 225 webinars and training events with others**
- **Strong & growing partnerships with development agencies and regional and global organizations in delivery of support**
- **Over 3,500 resources in curated library for policy makers**

Target Audiences

- **Primary**
 - Government Policy Makers and Advisors
- **Secondary**
 - Private-Sector Companies
 - Energy Entrepreneurs and Investors
 - Non-Governmental Organizations
 - Civil Society
 - Others Engaged in Clean Energy

Solutions Center: Partnerships

More than 35 international partners:

- Climate Technology Center and Network (CTCN)
- ECOWAS Center for Renewable Energy and Energy Efficiency (ECREEE)
- Inter-American Development Bank (IDB)
- International Energy Agency (IEA)
- International Partnership for Energy Efficiency Cooperation (IPEEC)
- International Renewable Energy Agency (IRENA)
- Low Emission Development Strategies Global Partnership (LEDS-GP)
- Renewable Energy Policy Network for the 21st Century (REN21)
- Sustainable Energy for All (SEforALL)
- United Nations Environment Programme (UN Environment)
- USAID Power Africa (USAID PA)

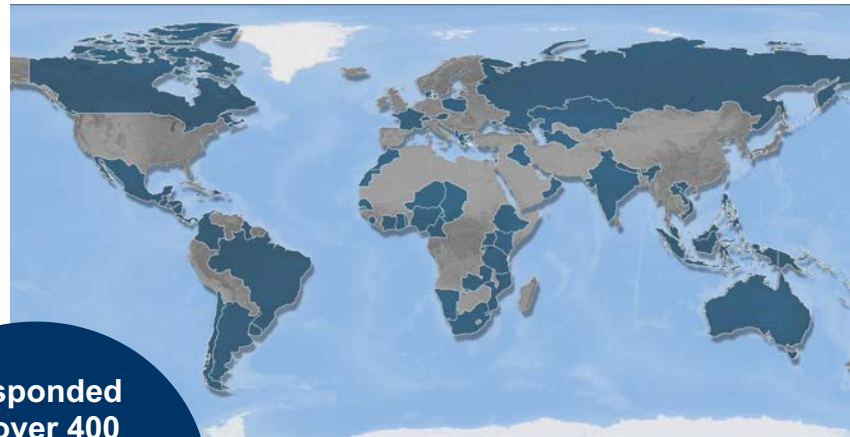


Ask an Expert: Our Experts in Action



We connect you to a global network of energy experts for personalized attention and quick response technical assistance on **strategies, regulations, standards, financial incentives, and energy transition programs** for a broad range of clean energy sectors and technologies including:

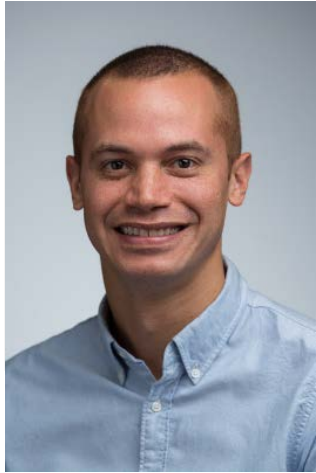
- Carbon Capture Utilization & Storage
- Energy Access
- Energy Efficiency
- Renewable Energy
- Smart Grid
- Transportation
- Utilities



Responded to over 400 requests for assistance from over 90 countries.

To request assistance, register on <http://cleanenergysolutions.org/expert>

Eric Lockhart, NREL



Eric is currently a Project Leader at the National Renewable Energy Laboratory based in Golden, CO. His current projects include:

- Solar Energy Innovation Network, where he is the technical analysis lead for four multi-stakeholder projects covering locational value of solar, opportunities to pair solar and EV charging, the roles solar and storage can play in resilience, and rate design and procurement for community choice aggregations.
- Micro-grids for Energy Access, where Eric leads research on sustainable business models and financing for micro-grid expansion in Sub-Saharan Africa to provide energy access, pathways for micro-grid cost reduction, and optimal deployment of batteries in micro-grids.
- Distributed Generation Interconnection Collaborative, where Eric is a co-project lead for research and stakeholder engagement related to distributed energy resource interconnection issues.

Eric is a graduate of Yale College, and also holds graduate degrees in Global Affairs and Business from Yale's Jackson Institute and its School of Management, respectively. He has been working at NREL since 2016, and worked in international development and finance prior to his graduate studies.

Ayomide Fatunde, PowerGen Renewable Energy



Ayomide Fatunde works as a business development and engineering associate for PowerGen Renewable Energy. She studied chemical engineering at the Massachusetts Institute of Technology and has experience across a vast array of industries with projects completed for Bain&Company, Teva Pharmaceuticals, GE Power, and the U.S. Department of Energy.

In her current role, she leads the development of technical strategy for new markets and heavily investigates the economics, design, and logistics of microgrid deployment across East and West Africa. Her interests lie in clean energy, development economics, process engineering and the role of complex materials in the future of energy transmission and storage.

Elisha Chesir, PowerGen Renewable Energy



Elisha works at PowerGen Renewable Energy, Engineering Division. He is mainly involved in design and technical analysis stages of mini-grids for PowerGen sites in Sub-saharan Africa.

Chesir studied Electrical and Electronic Engineering at the University of Nairobi and his past work experiences while at Huawei Technologies and LDK Africa lie in fixed data communication networks, noc administration and electrical services for commercial buildings.

Matthew Alcock, Standard Microgrid



Matthew Alcock is CTO at Standard Microgrid. His work focuses on R&D and GIS site assessment. After studying for a business science degree from the University of Cape Town he has undertaken various entrepreneurial activities before starting with Standard Microgrid in 2013 as a project manager, overseeing microgrid design, fabrication and installation.

Question and Answer Session



Eric Lockhart, NREL



**Ayomide Fatunde,
PowerGen Renewable
Energy**



**Elisha Chesir,
PowerGen Renewable
Energy**



**Matthew Alcock,
Standard Microgrid**

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