



## Reaching Universal Energy Access in Ghana

### 5<sup>th</sup> Mini Grid Action Learning Event and Summit

Day 1 – Monday, June 24 – 5 <sup>th</sup> Africa Mini Grids Summit & Country Programs	
Location: Ballroom 1	
<b>8:00</b>	<b>Breakfast and Registration</b>
<b>Opening Session – Location: Ballroom 1</b>	
<b>8:55</b>	<b>Welcome &amp; Introductory Remarks</b> Maggie Tan, CEO, <i>Magenta Global Pte Ltd</i>
<b>9:00</b>	<b>Introduction to the 5<sup>th</sup> Mini Grid Summit &amp; Country Programs &amp; Mini Grids – Lessons from the Field</b> <b>Prof. Abubakr S. Bahaj</b> , <i>Professor of Sustainable Energy, Head of Energy &amp; Climate Change Division, University of Southampton; Chief Scientific Adviser, Southampton City, United Kingdom</i>
<b>9:30</b>	<b>Partners in Progress: How the Mini Grid Sector Can Increase Speed and Lower Costs of Rural Electrification</b> Aaron Leopold, <i>Chief Executive Officer, Africa Minigrid Developers Association (AMDA)</i>
Country Programs	
<b>9:50</b>	<b>KENYA</b> <b>Kenya’s Renewable Energy Policy in Support of the Mini Grids – Latest updates</b> Mungai Kihara, <i>Chief Renewable Energy Officer, Kenya Ministry of Energy</i> <b>Strengthening Markets for Off Grid Solutions in Kenya</b> Nickson Bukachi, <i>Senior Renewable Energy Officer, Energy Regulatory Commission, Kenya</i> <b>GMG Facility Kenya; progress and lessons learned</b> Gerard Hendriksen, <i>Team Leader, GMG, IED</i>
<b>10:50</b>	<b>Coffee Break</b>
<b>11:10</b>	<b>NIGERIA</b> <b>Creating an Enabling Environment for a 10.000 Mini Grids Market</b> Suleiman Babamanu, <i>Senior Technical Project Manager, Nigeria Rural Electrification Agency</i> <b>Scaling up Finance for Mini Grids: Nigeria</b> Ifechukwude (“Chude”) Uwajeh, <i>Deputy Director, GreenMax Capital Group</i>



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<b>12:00</b>	<p><b>RWANDA</b>  <b>Off Grid Electricity Access Expansion Programs in Rwanda</b>  <i>Uwera Rutagarama, Director Primary and Social Energies Development, Rwanda Energy Group, Rwanda</i>  <b>Case Study from a Project Developer</b>  <i>Richard Mori, CEO, XPower, Rwanda</i></p>
<b>12:30</b>	<p><b>SIERRA LEONE</b>  <b>Update on Sierra Leone Rural Renewable Energy Project (RREP) – Establishing the enabling environment for a private sector driven rural mini grid market</b>  <i>Nick Gardner, Country Manager, UNOPS, Sierra Leone</i></p>
<b>12:50</b>	<b>Networking Lunch</b>
<b>14:00</b>	<p><b>ZAMBIA</b>  <b>Off Grid Electricity Access Expansion Programs in Zambia</b>  <i>Partie Kabango, Chief Engineer Power Generation and Distribution, Rural Electrification Authority, Zambia</i></p>
<b>14:20</b>	<p><b>UGANDA</b>  <b>The Role of Mini Grids to Address Uganda’s Power Deficit</b>  <i>Henry Semaganda, Senior Network Design Engineer, Rural Electrification Agency, Uganda</i></p>
<b>Regional Africa Programs</b>	
<b>14:40</b>	<p><b>Private Sector Mini Grids – Moving from transitional to transformational – Lessons from Tanzania, Somalia, Kenya, Nigeria &amp; Mali</b>  <i>Murefu Barasa, Managing Partner, EED Advisory Limited</i></p>
<b>15:00</b>	<p><b>Update on UK DFID support to the Green Mini Grids Sector in Africa</b>  <i>Steven Hunt, Senior Energy &amp; Innovation Advisor, Department for International Development</i></p>



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<b>15:20</b>	<b>Mini Grid Investment in Sub-Saharan Africa: Summary of Lessons Learned</b> Lothar Jakob, <i>Managing Director</i> , Steinbeis Consulting Impact Investing
<b>15:40</b>	<b>Coffee Break</b>
<b>16:10</b>	<p><b>Panel Discussion: Future Prospects for Electricity Access in Africa Through Mini Grids</b></p> <p>Chair: Prof. AbuBakr S. Bahaj, University of Southampton, UK</p> <ul style="list-style-type: none"> <li>• Mungai Kihara, Chief Renewable Energy Officer, Kenya Ministry of Energy</li> <li>• Suleiman Babamanu, Nigeria Rural Electrification Agency</li> <li>• Uwera Rutagarama, Director Primary and Social Energies Development, Rwanda Energy Group, Rwanda</li> <li>• Nick Gardner, UNOPS</li> <li>• Henry Semagnanda, Senior Network Design Engineer, Rural Electrification Agency, Uganda</li> <li>• Partie Kabango, Chief Engineer Power Generation and Distribution, Rural Electrification Authority, Zambia</li> </ul>
<b>16:40</b>	<b>Closing Remarks Prof. Abubakr S. Bahaj, Chair</b>
<b>Day 1: Monday, June 24 HOMER Foundational Training (by Invitation only for 30 participants)</b> <b>Location: Meeting Room 1</b>	
9:00 – 17:30	<b>Parallel Session <u>Closed-Door/Invitation Only</u></b>



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<b>Day 2 – Tuesday, June 25 – Ghana Universal Energy Access &amp; Mini Grid Roundtable</b> Location: Ballroom 1	
<b>8:00</b>	<b>Breakfast and Registration</b>
<b>8:55</b>	<b>Welcome and Introductions</b>
<b>9:15</b>	<b>Opening Keynote Address by Minister for Energy – Hon. John Peter Amewu</b>
<b>9:45</b>	<b>Path to country-wide electrification – Executive Secretary, Energy Commission, Dr. Alfred Ahenkorah</b>
<b>10:15</b>	<b>Achieving universal access to energy: the role of the World Bank – Henry Kerali, World Bank Country Director and Ivo Imperato, World Bank Program Leader for Sustainable Development</b>
<b>10:30</b>	<b>Coffee Break and Ministerial Press Event</b>
<b>11:00</b>	<b>Panel Discussion: The evolution, opportunities, and challenges of universal energy access</b> <ul style="list-style-type: none"> <li>How has the enabling environment for energy access evolved over the past 20 years?</li> <li>What are the challenges that still need to be met to achieve universal access?</li> <li>Meeting the challenges: Off-grid, mini grid and grid extension solutions</li> </ul> <p><b>Panelists:</b> Prof. Oteng Adjei, former Minister of Energy; Clement Abavana, Noxie Consult Ltd.; Jabesh Amissah-Arthur, CEO, Arthur Energy Advisors; Ing. John Nuworklo, Fmr. Managing Director, NEDCo; Dr. Mensah Kutin, Regional Director, ABANTU for Development</p> <p><b>Facilitator:</b> Ing. A. T. Barfour, Ghana SREP Coordinator</p>

For a digital version of the agenda and other materials visit <http://bit.ly/WBGhanaMaterials>



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<b>12:30</b>	<b>Lunch &amp; Introduction to Homer Modeling Tool</b>
<b>14:00</b>	<b>Role of Mini Grid and Off-grid Solutions in Achieving Universal Access</b> <ul style="list-style-type: none"> <li>• <b>Challenges &amp; Opportunities</b> – Seth A. Mahu, Deputy Director, Renewable Energy, Ministry of Energy</li> <li>• <b>Q&amp;A</b></li> </ul>
<b>14:45</b>	<b>Promoting Productive Uses of Energy as Part of Universal Access</b> <ul style="list-style-type: none"> <li>• <b>Challenges &amp; opportunities</b> – Dr. Julius Ahiekpor, Centre for Energy, Environment and Sustainable Development (CEESD)</li> <li>• <b>Q&amp;A</b></li> </ul>
<b>15:30</b>	<b>Afternoon Coffee Break</b>
<b>16:00</b>	<b>Panel Discussion: Tariffs, Financing, and Business Models for Mini grids</b> <ul style="list-style-type: none"> <li>• <b>What are the challenges in mainstreaming mini grid tariffs into the national tariff systems?</b></li> <li>• <b>What strategies have been adopted to overcome financing barriers to mini grid promotion towards universal access in Ghana?</b></li> <li>• <b>The role of private sector in the public sector-led business models</b></li> </ul> <p><b>Panelists:</b> Oscar Amonoo-Neizer, Director of Energy, PURC; Antony Karembu, AfDB SEFA Coordinator; Henry Vanderpuye, Access Manager, GEDAP; Nicole Poindexter, CEO, Black Star Energy  <b>Facilitator:</b> Ing. Emmanuel Osafo, Deputy Chief Executive, VRA</p>
<b>17:15</b>	<b>Close of Day Remarks</b> – Dana Rysankova, World Bank Global Lead for Energy Access Lawrence Apaalse, Chief Director, Ministry of Energy
<b>17:30</b>	<b>Evening Reception – Location: Pool Area</b>
<b>Day 2: Tuesday June 25 ODYSSEY Training (by Invitation only) Location: Meeting Room 1</b>	
<b>13:30 – 17:30</b>	<b>Parallel Session <u>Closed-Door/Invitation Only</u></b>



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### 5<sup>th</sup> Mini Grid Action Learning Event and Summit

Day 3 – Wednesday, June 26 – Global Technical Conference on Mini Grids	
Plenary Location: Ballroom 1	
<b>7:30</b>	<b>Breakfast and Registration</b>
<b>8:30</b>	<b>Opening</b> <ul style="list-style-type: none"> <li>• <b>Welcome and Launch of World Bank Mini Grid Report</b> – Rohit Khanna, ESMAP Manager</li> <li>• <b>Remarks:</b> Iain Walker, British High Commissioner to Ghana – Reaching Universal Energy Access – A perspective from Development Partners</li> <li>• <b>Remarks:</b> Senior Minister Yaw Osarfo-Mafo, Government of Ghana</li> <li>• <b>Keynote:</b> Dr. Kandeh Yumkella, former UN Under-Secretary-General and Special Representative of the Secretary-General for Sustainable Energy for All</li> </ul>
<b>9:30</b>	<b>Launch of the Comprehensive Mini Grid Report</b> <ul style="list-style-type: none"> <li>• Introduction to the Mini Grid Report &amp; Today’s Agenda – Jon Exel, World Bank</li> <li>• State of the Mini Grid Market Globally – Dr. James Knuckles, World Bank consultant</li> <li>• Introduction to Parallel Clinic Topics – Catherine Morris, CBI</li> </ul>
<b>10:15</b>	<b>Coffee Break</b>
<b>11:00</b>	<b>Parallel Clinics on the 10 Pillars of Mini Grids (Round 1):</b> <ul style="list-style-type: none"> <li>A. <b>Demand Creation and Productive Uses (Location: Ballroom 2)</b> – Juliette Besnard &amp; Tatia Lemondzhava, World Bank, Facilitator               <ul style="list-style-type: none"> <li>○ Closing the Circuit – Richenda Van Leeuwen, Rocky Mountain Institute</li> <li>○ Electric Cooking – Besnik Hyseni, World Bank and Dr. Ed Brown, UK Low Carbon Energy for Development Network</li> </ul> </li> <li>B. <b>Workable Regulations (Location: Ballroom 1)</b> – Gianmarco Servetti, Castalia, Facilitator               <ul style="list-style-type: none"> <li>○ Tanzania: Proposed SPP Development Rules – Victor Labaa, Energy and Water Utilities Regulatory Authority (EWURA)</li> <li>○ Mini Grid Policies and Regulatory Frameworks: The Case of Nigeria – Suleiman Babamanu, Nigeria Rural Electrification Agency</li> <li>○ Private Sector Perspective on Workable Regulations – Rik Wuts, Powerhive</li> </ul> </li> <li>C. <b>Access to Finance (Location: Meeting Room 6)</b> – Subodh Mathur, Facilitator               <ul style="list-style-type: none"> <li>○ Project Finance for Scaling Mini Grids – Gabriel Davies, CrossBoundary Energy Access</li> <li>○ Early-Stage Financing in Green Sectors in Sub-Saharan Africa – Jin Lee, World Bank</li> </ul> </li> </ul>

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- D. Closing the Gap between Women and Men in the Off-Grid Sector (Location: Meeting Room 1)**  
 – Nicole Poindexter, Black Star Energy, Facilitator
- Creating Employment Opportunities for Women – Hayley Bron, PEG Africa
  - Building Gender Equity into National Rural Electrification Programs – Ifunanya Nwandu-Dozie, Nigeria Rural Electrification Agency

**12:45 Lunch**

**13:45 Parallel Clinics on the 10 Pillars of Mini Grids (Round 2):**

- A. Technology and Costs (Location: Ballroom 2) – Dr. Chris Greacen, Facilitator**
- Burkina Faso & Côte d'Ivoire Rural Electrification Case Studies – Mireia Gil, Azimut 360
  - Strategies for Reducing Costs – Dr. Hasna Khan, CEO, PSL-USA
- B. Geospatial Portfolio Planning (Location: Meeting Room 1) – Ashish Shrestha, World Bank, Facilitator**
- Nigeria Case Study – Suleiman Babamanu, Nigeria REA
  - Tools for geospatial planning – Eitan Hochster, Odyssey Energy Solutions
  - Private Sector perspective – Ibrahim Abada, Engie
- C. Community Engagement (Location: Meeting Room 6) – Dramani Bukari, SNV World, Facilitator**
- Ishmael Edjekumhene, KITE (tbc)
  - Kelly Carlin, Rocky Mountain Institute
  - Dr. Ishmael Ackah, Energy Economist, Ghana Energy Commission
- D. Business Models and Enabling Business Environment (Location: Ballroom 1) – Dr. James Knuckles, Facilitator**
- Three Generations of Mini Grids – Tatia Lemondzhava, World Bank
  - Experience from Kenya – Mungai Kihara, Kenya Ministry of Energy
  - Bangladesh Case Study – Syeeda Yeasmeen Meer, Idcol

**15:30 Coffee Break and Session Switch Over**

**16:00 Parallel Clinics on the 10 Pillars of Mini Grids (Round 3):**

- A. Taking Mini Grids to Scale Sustainably/ Institutional Framework (Location: Ballroom 2) – Subodh Mathur, Facilitator**
- Ghana Case Study – Seth Mahu, Ghana Ministry of Energy
  - Institutional Arrangements to Support the Private Sector – Rik Wuts, Powerhive
- B. Capacity Building/Training (Location: Ballroom 1) – Sunita Chikkatur Dubey, Facilitator**



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- Mali Case Study - Mahamadou Kanta, Mali Director of Rural Electrification
- Certifications & Competencies for Mini Grid Developers – Mike Wilson, IEEE
- Bangladesh Case Study – Rasel Ahmed, Idcol

**C. Transforming Regional Energy Markets through Policy Harmonization (Location: Meeting Room 1) – Eng. Julius James Gitonga, East African Centre for Renewable Energy and Energy Efficiency (EACREEE) and Kenya Ministry of Energy, Facilitator**

- Prof. AbuBakr Bahaj, University of Southampton, UK
- Nicola Bugatti, TTA
- Damian Casmiri, Africa Enterprise Challenge Fund

**D. Role of the Private Sector (Location: Meeting Room 6) – Ricky Buch, Facilitator**

- Nicole Poindexter, CEO, Black Star Energy
- Aaron Leopold, Executive Director, Africa Mini Grid Developers Association (AMDA)

**17:45 Coffee Break; Return to Plenary – Ballroom 1**

**18:00 Closing Session and Adjourn**

- Next Steps: Development Partners – Rohit Khanna, World Bank
- Next Steps: Private Sector – Aaron Leopold, AMDA
- Closing: Hon. William Owuraku-Aidoo, Deputy Minister, (Power) Ministry of Energy





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<b>Day 4 – Thursday, June 27 – Ghana: Implementation – Reaching Universal Energy Access by 2020</b> Plenary Location: Ballroom 1	
<b>8:00</b>	<b>Breakfast and Registration</b>
<b>9:00</b>	<b>Welcome and Opening Remarks</b> <ul style="list-style-type: none"> <li>Hon. Joseph Cudjoe, Ministry of Energy, Deputy Minister in Infrastructure &amp; Finance</li> <li>Dr. Alfred Ahenkorah Executive Secretary, Energy Commission – Contribution of energy efficiency to universal access</li> <li>David Vilar, World Bank Program Lead, Ghana</li> </ul>
<b>9:45</b>	<b>Setting the Stage</b> <ul style="list-style-type: none"> <li><b>Geospatial Planning: Focusing on the remaining 15% non-electrified communities</b> – George Owusu, Senior GIS Specialist, CERSGIS, University of Ghana</li> <li><b>Technical Solutions: Grid Extension, Mini Grids, Off-grid</b> – Ing. A. T. Barfour, Ghana SREP Coordinator</li> </ul>
<b>10:15</b>	<b>Coffee Break</b>
<b>10:45</b>	<b>Parallel Sessions</b> <ol style="list-style-type: none"> <li>1. <b>Geospatial Planning (Location: Ballroom 1)</b> <ul style="list-style-type: none"> <li><b>Discussants:</b> George Owusu, CERSGIS; Seth Mahu, Ministry of Energy; Fred Appiah, Energy Commission; Seth Twum-Akwaboah, AGI; Ashish Shrestha; World Bank (facilitator)</li> </ul> </li> <li>2. <b>Technical Solutions (Location: Ballroom 2)</b> <ul style="list-style-type: none"> <li><b>Discussants:</b> George Eduful, ECG; Moses Tawiah, NEDCO-Northern Utility; Kwadwo Obeng, PDS; Kwasi Agyenim Boateng, AGSI; Nicole Poindexter, Blackstar Energy; Ing. A. T. Barfour, Ghana SREP Coordinator (facilitator)</li> </ul> </li> </ol>
<b>12:45</b>	<b>Lunch</b>
<b>13:45</b>	<b>Parallel Session Report-Outs</b>
<b>14:15</b>	<b>Setting the Stage:</b> <ul style="list-style-type: none"> <li><b>Cost, Financing, and the Role of Development Partners in Reaching Universal Access – (Location: Ballroom 1)</b> Ing. Sulemana Abubakari, Deputy Director, Distribution, Ministry of Energy; Mark Newton, USAID</li> <li><b>Institutional Arrangements for Achieving Universal Access – (Location: Ballroom 2)</b> Ing. A. T. Barfour, Ghana SREP Coordinator</li> </ul>



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<b>14:45</b>	<b>Afternoon Coffee Break</b>
<b>15:00</b>	<b>Parallel Sessions</b> <ol style="list-style-type: none"> <li>1. <b>Cost, financing, and the role of development partners (Location: Ballroom 1)</b> <ul style="list-style-type: none"> <li>○ <b>Discussants:</b> Ing. Sulemana Abubakari, Ministry of Energy; Mark Newton, USAID; Antony Karembu, AfDB; Joseph Kwadwo Asenso, Ministry of Finance; Kingsley Adofo-Addo, Ecobank; Sunita Dubey, World Bank (facilitator)</li> </ul> </li> <li>2. <b>Institutional arrangements (Location: Ballroom 2)</b> <ul style="list-style-type: none"> <li>○ <b>Discussants:</b> Seth Mahu, Ministry of Energy; Fred Appiah, Energy Commission; Seth Twum-Akwaboah, AGI; Ing. Ekow Kwofie, ECG; Moses Tawiah, NEDCO-Northern Utility; Ishmael Edjekumhene, KITE/PURC; Kwadwo Obeng, PDS; Dr. Daniel Benefor, EPA; Ing. A. T. Barfour, Ghana SREP Coordinator (facilitator)</li> </ul> </li> </ol>
<b>17:00 – 17:30</b>	<b>Parallel Session Report-Outs (Location: Ballroom 1)</b> <b>Closing Remarks and Adjourn – Jon Exel, World Bank &amp; Seth Mahu, Ministry of Energy</b>

<b>Day 4: Thursday, June 27 Green Mini Grids Africa (Location: Meeting Room 2)</b>	
8:30 – 12:45	<b>Parallel Session <u>Closed-Door / Invitation Only</u></b>
<b>Day 4: Thursday, June 27 Clean Cooking Forum (Location: Meeting Room 4)</b>	
9:00 – 16:30	<b>Parallel Session <u>Closed-Door / Invitation Only</u></b>
<b>Day 4: Thursday, June 27 Development Partners Forum (Location: Meeting Room 1)</b>	
14:00 – 17:30	<b>Parallel Session <u>Closed-Door / Invitation Only</u></b>