

## SUMMARY OF THE FOURTH SUSTAINABLE ENERGY FOR ALL FORUM: 2-3 MAY 2018

The fourth Sustainable Energy for All (SEforALL) Forum convened from 2-3 May 2018 at the Convento do Beato in Lisbon, Portugal. Under the overarching theme of ‘Leaving No One Behind,’ approximately 900 representatives from government, business, civil society and international organizations highlighted the latest evidence of progress on Sustainable Development Goal (SDG) 7 (to secure affordable reliable, sustainable and modern energy for all by 2030).

The Forum was organized around opening plenaries each morning, featuring a scene-setting keynote address and ‘Wake-Up Call,’ followed by high-level dialogues focusing on ‘Knowledge into Action’ and ‘Disruptive Voices.’ Parallel ‘Deep Dive’ discussions focused on critical energy sectors and emerging themes, such as energy in humanitarian settings, access to cooling, and interlinkages between energy and health.

Participants also met in 18 Partner Working Sessions, designed and organized by SEforALL partners, to catalyze action on specific issues that will enable progress on SDG7. A range of stakeholders addressed specific energy access issues and scalable innovations needed to achieve the three SEforALL objectives: ensuring universal access to modern energy services; doubling the share of renewable energy in the global energy mix; and doubling the global rate of improvement in energy efficiency.

The first day focused on overcoming challenges. A highlight of the opening day was the presentation of the publication ‘Tracking SDG7: The Energy Progress Report,’ which benchmarks annual progress toward achieving the SDG 7 targets that directly relate to the SEforALL objectives. Despite encouraging progress in some countries and energy sectors, the 2018 report finds that overall progress toward the SDG 7 targets remains off track. In particular, the study reveals that one billion people – or 13% of the world’s population – still live without electricity, and an estimated 674 million people, mostly living in sub-Saharan Africa, will likely not have access to electricity by 2030. The slow uptake of clean cooking technologies is also highlighted, as is the less-than-hoped for increase in energy efficiency and renewables. Discussions throughout the day focused on the implications of these data on the ground and addressed remaining challenges and unmet needs.



**Rachel Kyte**, SEforALL CEO and Special Representative of the UN Secretary-General for Sustainable Energy for All (center), and participants at the end of the Forum

The second day of the Forum focused on innovative solutions that can help deliver change at the speed and scale required to achieve SDG 7. Various commitments and new partnerships were announced under the campaign, ‘Shine: Investing in Energy Access for All,’ in which 35 philanthropists, faith leaders and private capital organizations have committed to advancing clean energy access.

### A BRIEF HISTORY OF SUSTAINABLE ENERGY FOR ALL

In December 2010, the UN General Assembly (UNGA) adopted resolution 65/151, designating 2012 as the International Year of Sustainable Energy for All. The resolution also requested the UN Secretary-General, in consultation with relevant agencies

#### IN THIS ISSUE

A Brief History of Sustainable Energy for All . . . . .	1
Report of the Meeting . . . . .	2
Day 1: Overcoming Challenges . . . . .	3
Day 2: Scaling Solutions . . . . .	7
Partner Working Sessions . . . . .	10
Upcoming Meetings . . . . .	17
Glossary . . . . .	17

in the UN system and UN-Energy, to organize and coordinate activities to be undertaken during the International Year of Sustainable Energy for All. UNGA recognized that access to modern affordable energy services in developing countries was essential for achieving internationally agreed development goals, which would help reduce poverty and improve the conditions and standard of living for the majority of the world's population.

In response to this resolution, UN Secretary-General Ban Ki-moon launched the SEforALL initiative to mobilize action from all sectors of society to attain sustainable energy for all by 2030. He set three interlinked objectives to be achieved by 2030: providing universal access to modern energy services; doubling the global rate of improvement in energy efficiency; and doubling the share of renewable energy in the global energy mix. In September 2011, to guide the work carried out under the SEforALL initiative, Ban appointed a High-level Group on Sustainable Energy for All, comprised of leaders from around the world.

**GLOBAL ACTION AGENDA:** This strategic document was developed and endorsed by the High-level Group in April 2012, to provide guidelines for governments, the private sector and civil society to engage with the UN as a convening platform where key stakeholders from both developing and developed countries can mobilize commitments, foster new public-private partnerships and leverage investments needed to make transformative changes to the world's energy systems.

The Global Action Agenda identifies 11 Action Areas that provide a framework for organizing collaborative efforts across all relevant sectors. These Action Areas are classified as 'sectoral' or 'enabling.' The sectoral areas are: modern cooking appliances and fuels; distributed electricity solutions; grid infrastructure and supply efficiency; large-scale renewable power; industrial and agricultural processes; transportation; and buildings and appliances. The enabling areas are: energy planning and policies; business model and technology innovation; finance and risk management; and capacity building and knowledge sharing.

**INTERNATIONAL DECADE ON SUSTAINABLE ENERGY FOR ALL:** In December 2012, the UNGA declared 2014-2024 as the UN Decade of Sustainable Energy for All. Resolution 67/215 called upon Member States to galvanize efforts to make universal access to sustainable modern energy services a priority, and stressed the need to improve access to reliable, affordable, economically viable, socially acceptable and environmentally sound energy services and resources for sustainable development. The UNGA called upon governments and all relevant stakeholders, to combine, as appropriate, the increased use of new and renewable energy resources, more efficient use of energy, greater reliance on advanced energy technologies, including cleaner fossil fuel technologies, and the sustainable use of traditional energy resources, to meet the increasing need for energy services.

**FIRST SEforALL FORUM:** Held in New York, US, from 4-6 June 2014, this event officially launched the UN Decade of Sustainable Energy for All 2014-2024, with its initial two-year focus on women, children and health. The Forum assessed

progress on sustainable energy since the Rio+20 Conference, showcased successes, shared best practices, presented new commitments, and worked to catalyze action to help shape the global energy debate for the next decade.

**SECOND SEforALL FORUM:** Held in New York, US, from 18-21 May 2015, under the overarching theme of 'Financing Sustainable Energy for All,' this event included the first-ever Global Energy Ministerial Dialogue at the UN. The Forum featured multi-stakeholder discussions, including more than 70 dialogue sessions under eight thematic tracks on finance, energy access, energy efficiency, renewable energy, country action, innovation for impact, global policy agenda and growing the movement. The Ministerial Dialogue concluded with the launch of a new Global Sustainable Energy for All Commitment Platform as an institutional framework for convening the broad partnerships required to accelerate achievement of SEforALL's objectives.

**THIRD SEforALL FORUM:** This Forum convened from 3-5 April 2017 in New York, US, under the theme 'Going further, faster – together.' The meeting included 33 Partner Working Sessions and launched several initiatives, including: the Global Tracking Framework, outlining progress made towards the three SEforALL objectives; 'The Global Futures Report,' containing a summary of the feasibility and challenges of achieving a 100% renewable future; and the Shine initiative, a global campaign dedicated to ending energy poverty and unlocking new opportunities for billions of people.

## REPORT OF THE MEETING

This report is organized in two parts. The first summarizes discussions held over the two days in plenaries, including keynote speeches, Wake-Up Calls, high-level Knowledge into Action dialogues and Disruptive Voices, as well as the six Deep Dive sessions.

The second part summarizes a selection of the 18 Partner Working Sessions held over the two days.



**Rachel Kyte**, CEO, SEforALL, and Special Representative of the UN Secretary-General for Sustainable Energy for All

**DAY 1: OVERCOMING CHALLENGES****OPENING, INTRODUCTORY REMARKS AND**

**KEYNOTE ADDRESS:** Opening the Forum on Wednesday morning, Rachel Kyte, Chief Executive Officer (CEO), SEforALL, and Special Representative of the UN Secretary-



**António Mexia**, CEO, EDP, and Administrative Board Chair, SEforALL

General for Sustainable Energy for All, welcomed participants to Lisbon, noting Portugal's commendable journey toward sustainable energy and underscoring that attaining sustainable energy for all underpins achieving many of the other SDGs in addition to SDG 7.

António Mexia, CEO, Energias de Portugal (EDP), and Administrative Board Chair, SEforALL, said the objectives of the SDGs and the Paris Agreement must be merged into a single agenda, noting SEforALL addresses the two key challenges of our time: income inequality and climate change.

Speaking via video, UN Secretary-General António Guterres stressed that far more needs to be done in all sectors to move towards sustainable energy. He said it is time to end fossil fuel use, noting that "the stone age did not end because we ran out of stones and that we need to find a better way."

**TRACKING SDG 7: THE ENERGY PROGRESS**

**REPORT:** On Wednesday morning, Riccardo Puliti, Senior Director, Head of Energy and Extractives, World Bank, introduced the report 'Tracking SDG 7: The Energy Progress Report 2018,' formerly known as the Global Tracking Framework

report. He said it is a comprehensive and reliable source to monitor progress and help overcome challenges to achieve SDG 7, which he said would not be realized by 2030, based on current predictions.

Representatives of partner agencies involved in producing the report then presented specific findings on progress towards the four SDG 7 targets of electricity access, clean cooking, energy efficiency and renewable energy.

On indicator 7.1.1, which looks at the proportion of the population with access to electricity, Vivien Foster, Global Lead for Energy Economics, Markets and Institutions, Energy and Extractives Global Practice, World Bank, said that by 2030 only 92% of the global population is projected to have such access. However, today, at least 30 million people in the developing world have a solar home system and Africa's access deficit has begun to fall for the first time.

On indicator on 7.1.2, which measures the proportion of the population with primary reliance on clean fuels and technologies, Maria Neira, Director, Department of Public Health, Environmental and Social Determinants of Health, World Health Organization (WHO), noted progress is much slower, with the percentage of the population with access to clean cooking projected to only reach 73% by 2030, and progress from the 2010 baseline of 58% increasing to only 59% in 2016.

On 7.2.1, the indicator that measures the renewable energy share in total final energy consumption, Elizabeth Press, Director of Planning and Programme Support, International Renewable Energy Agency (IRENA), noted only a very slight increase from 16.7% of final energy consumption in 2010 to 17.5% in 2015. She explained that while progress in the electricity sector is very promising, heating and transport barely improved during the same five-year period. She emphasized that the business and technological case for renewables was reported as very strong.



L-R: Laura Cozzi, IEA; Vivien Foster, World Bank Group; Maria Neira, WHO; and Elizabeth Press, IRENA

On 7.3.1, which looks at energy intensity measured in terms of primary energy and GDP, Laura Cozzi, Head of the Energy Demand Outlook Division, International Energy Agency (IEA) highlighted that the compound average growth rate in efficiency improvements was at 1.3% in 2010, increased to 2.2% by 2016, and is projected to reach 2.4% in 2030, falling short of the 2.6% goal. She explained that the industrial sector, especially in China, has been successful in decreasing energy intensity, but that freight transport has seen very slow progress, as it is covered by efficiency standards in only a few countries.

**THE WAKE-UP CALL:** On Wednesday morning, SEforALL CEO Kyte reflected on key insights on SDG 7 trends and data from the Energy Progress Report 2018 as well as the challenges around meeting specific SDG 7 targets relating to: energy for all; clean fuels for all; expansion of energy efficiency measures in all end-use sectors; and deploying renewable energy for heating and cooling applications. She reiterated that the question is no longer “what we need to do, but how those lagging behind can achieve the same transformation.”

**KNOWLEDGE INTO ACTION: POLICY MATTERS:** During this high-level session on Wednesday morning, government leaders reflected on issues highlighted in the opening sessions and provided perspectives on challenges in meeting sustainable development and climate goals.

Moderator Elizabeth Littlefield, Senior Counselor, Albright Stonebridge, introduced the speakers, with Gale Rigobert, Minister for Education, Innovation, Gender and Sustainable Development, Saint Lucia, noting the impact of hurricanes on energy infrastructure. She underscored the importance of access to energy and energy resilience, underlining that extreme weather events are predicted to increase in frequency.

Leonardo Beltran Rodriguez, Deputy Secretary for Planning and Energy Transition, Mexico, explained the use of a trust fund connecting different communities with available technologies, aiding people in accessing the market and promoting technology. He explained how large energy users pay a surcharge that is then ploughed back into the trust fund.

Germaine Kamayirese, Minister of State for Energy, Water and Sanitation, Rwanda, expanded on national strategies and policies to connect the whole population, using both on- and off-grid solutions, as well as performance indicators.

Masamichi Kono, Deputy Secretary-General, Organisation for Economic Co-operation and Development (OECD), presented his organization’s research, which shows that by investing in the correct areas at the right time in the right proportions, the world can come close to achieving the Paris Agreement goals. He stressed the importance of policy coherence and that incentives must align with policy goals.

João Pedro Matos Fernandes, Minister of Environment, Portugal, highlighted the balancing act between supporting “green” electricity and convincing industry players that relying on such electricity will not compromise grid stability.

During discussion, panelists described how: pilots and experimentation can benefit from small island settings where correcting course is easier; Mexico is mandating increasing consumption of clean energy certificates by electricity providers to signal expanding demand for renewables; and ‘negative policies’ favorable to fossil fuels, such as subsidies, tax incentives and regulations, counter policy attempts to promote clean energy. They also noted the business case for renewables, given their cost competitiveness, and called for more action in the transportation sector.

**THE DEEP DIVES: Electricity for All in Sub-Saharan Africa:** On Wednesday morning, this session, moderated by James Irungu Mwangi, Executive Director, Dalberg Group, explored success stories and lessons learned on what is needed to close the electricity gap for 600 million people in sub-Saharan Africa.

Opening the session, Shegun Bakari, Advisor to the President of Togo, discussed his country’s transition from a grid-centered approach toward smart and decentralized energy solutions, and identified one of the key success factors as a clear political vision.

A panel discussion ensued, highlighting different stakeholder perspectives. Panelists were: Felix Bikpo, CEO, African Guarantee Fund for Small and Medium Sized Enterprises;

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L-R: **Elizabeth Littlefield**, Albright Stonebridge Group; **Gale Rigobert**, Minister for Education, Innovation, Gender Relations and Sustainable Development, Saint Lucia; **Leonardo Beltran Rodriguez**, Deputy Secretary for Energy Planning and Transition, Mexico; **Germaine Kamayirese**, Minister for Energy, Water and Sanitation, Rwanda; **Masamichi Kono**, Deputy Secretary-General, OECD; and **João Pedro Matos Fernandes**, Minister of Environment, Portugal



L-R: **James Mwangi**, Executive Director, Dalberg Group; **Andrew Herscowitz**, Coordinator, Power Africa, USAID; **Felix Bikpo**, CEO, African Guarantee Fund for Small and Medium-Sized Enterprises; **Kristina Skierka**, Co-Founder and CEO, Power for All; **Nthabiseng Mosia**, Co-Founder and CFO, Azimuth | Easy Solar; and **Philippe Miquel**, CEO, ENGIE Western & Central Africa

Andrew Herscowitz, Coordinator, Power Africa, United States Agency for International Development (USAID); Kristina Skierka, CEO, Power for All; Nthabiseng Mosia, Chief Financial Officer, Azimuth | Easy Solar; and Philippe Miquel, CEO, ENGIE Western & Central Africa.

The discussions highlighted the role of guarantee funds in bridging the knowledge and skills gap for both small and medium-sized enterprises and funding partners to achieve sufficient scale. On lessons learned from energy projects on the continent, speakers stressed the need to communicate, and learn from, failed approaches, including policies that lead to market distortions, impose top-down solutions or do not encourage a range of business models.

On catalyzing partnerships, speakers noted the importance of clear policies and targets, and multi-stakeholder platforms to encourage the formulation of joint solutions as well as accountability.

On how to target last-mile populations, Mosia said the approach in Sierra Leone focused on achieving a critical mass of consumers through offering simple, low-cost solar lanterns to reach a critical mass of consumers able to invest in higher-end technologies, such as home solar systems.

Other issues raised included: the importance of developing a range of technology options tailored to different local contexts; the role of high-quality data tools in driving more efficient distribution and financing models; the need to balance between access and efficiency; moving away from a focus on just supplying “electrons” towards the blending of power supply and services; and addressing gaps in decentralized systems through integrated planning models.

**Clean Fuels for All:** This session took place on Wednesday morning and explored large-scale market solutions, which are needed to provide three billion people with clean cooking access by 2030. Panelists were: Carola van Rijnsoever, Director of Inclusive Green Growth and Ambassador for Sustainable



L-R: **Bessem Enonchong**, Country Director-Cameroon, Global LPG Partnership; **Hajia Alima Mahama**, Minister for Local Government and Rural Development, Ghana; **Greg Murray**, CEO, KOKO Networks; **Eric Reynolds**, CEO, Inyenyeri; **Dymphna van der Lans**, CEO, Global Alliance for Clean Cookstoves; **Carola van Rijnsoever**, Director of Inclusive Green Growth and Ambassador for Sustainable Development, Ministry of Foreign Affairs, the Netherlands; and **Rachel Kyte**, SEforALL CEO and Special Representative of the UN Secretary-General for Sustainable Energy for All

Development, Ministry of Foreign Affairs, the Netherlands; Bessem Enonchong, Country Director-Cameroon, Global LPG Partnership; Hajia Alima Mahama, Minister of Local Government and Rural Development, Ghana; Greg Murray, CEO, KOKO Networks; Eric Reynolds, CEO, Inyenyeri; and Dymphna van der Lans, CEO, Global Alliance for Clean Cookstoves.

Moderator Rachel Kyte noted that the speakers represent all aspects of the solution. Participants discussed the importance of clean cooking, particularly for the health of women and children, noting it saves trees and time. They highlighted that there is no silver bullet and different solutions in terms of stoves, fuels and supply chains could be adopted depending on the context. They called for an inclusive, holistic approach and multi-stakeholder collaboration involving different ministries, communities and youth. They also looked into liquefied petroleum gas (LPG) and its use in Ghana and Cameroon; discussed moving from traditional fuels to sustainable biomass; and stressed the need for investment, including in the form of grants and consumer financing, noting financial sources should allow time to establish a strong market.

The discussions delved into the ethanol business, describing how clean fuel solutions and industries get built, and how ethanol use achieves clean cooking at a low price. Participants also discussed the use of pellets as a fuel in Rwanda, its accessibility for the poorest, and the importance of collecting data and feeding them into the carbon credit system. They defined necessary incentives as tax breaks and regulations, including ironing out differences between tax and subsidy regimes for different types of fuels, and opposed wasting more money on investigating potential solutions when readily-available investment options already exist.

In closing, they called for a focus on bankable projects and on the empowerment of women, and stressed that clean cooking is a multi-billion dollar potential market.

**Cooling for All:** This session on Wednesday morning featured: Andrea Voigt, Director General, European Partnership for Energy and the Environment; Maria Neira, Director, Department of Public Health, Environmental and Social Determinants of Health, WHO; Nithya Ramanathan, CEO, Nexleaf Analytics; and Fatih Özkadı, Global Head of Sustainability and Corporate Affairs, Arçelik Group. Moderator Toby Peters, Professor in Cold Economy, University of Birmingham, framed the conversation around the following question: “How important is cooling for human development?”

Explaining that cooling touches many aspects of life, including health, food and comfort, panelists elaborated on the strain that increased demand will create on achieving clean energy and climate goals. Focusing on solutions, they called for a stepwise approach that combines existing low-emission, low-global warming potential, high-efficiency technology with the current opportunity created by the sale of thousands of vaccine cold chains and millions of new refrigerators.

The discussions underscored the importance of making energy efficiency the first priority. Stressing that maintenance can greatly improve efficiency, panelists noted the lack

of skilled labor in the sector, and called for education for consumers and the workforce. One panelist also noted that sensor technology can pinpoint maintenance and problems as they arise. Another added that while new technology can be helpful, often existing technology simply needs to be adapted to on-the-ground realities. Others addressed the need to reduce demand, noting that many buildings are overcooled, creating both discomfort and health impacts.

Discussing ways to overcome barriers, one panelist listed challenges as high taxes on product components, high prices and slow market transformation. Highlighting the intersections with public health in terms of negative effects (air pollution) and positive impacts (refrigeration for medicines), one panelist called for using the health argument to stimulate private sector investment. Another pointed to “siloes” approaches, citing, as an example, when a health ministry might independently buy refrigerators for vaccine cold chains while an environmental ministry has set efficiency goals. Panelists further highlighted the efficacy of public-private partnerships.

**DISRUPTIVE VOICES: INNOVATIONS THAT ARE DRIVING CHANGE:** This session, on Wednesday afternoon, featured Per Heggenes, CEO, IKEA Foundation, who described his commitment to supporting innovative energy solutions in remote areas and humanitarian settings, such as funding the first solar power plant in a camp hosting 50,000 refugees in Jordan in 2017. Issuing a call for action, he stressed thinking beyond just lighting towards productive energy for the poor, and bringing everyone to the table.

**INTERACTIVE DISCUSSION:** Heidi Schroderus-Fox, Director, UN Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (UN-OHRLS), introduced the winners of ‘Voices of a Brighter Future,’ a competition for journalists from least developed countries (LDCs) covering electricity access issues. The winners were: Kossi Balao (Togo); Sèna Libla (Benin); Moussa Ngom (Senegal); James Chavula (Malawi); Florida Zossoungbo (Benin); Safia Mahdi (Yemen); Abu Siddique (Bangladesh); and Milo Milfort (Haiti). Five of the winners in attendance at the Forum received commemorative plaques and provided short descriptions of their stories.



Winners of the ‘Voices of a Brighter Future’ journalism competition

**CLOSING OF DAY 1:** Wrapping up the first day, Rachel Kyte stressed that: a leadership cohort of countries now have ambitious targets; some LDCs are putting efficiency at the heart of their efforts; and energy is being talked about in a “smarter way” and woven into the broader picture, such as how reliable electricity affects the way health care is delivered or schools are run.



**Fernando Medina**, Mayor of Lisbon

In closing, Fernando Medina, Mayor of Lisbon, said the fight for clean, affordable, sustainable energy is going to be won or lost in cities, and highlighted Lisbon’s commitment to pushing the SEforALL agenda forward.

## DAY 2: SCALING SOLUTIONS

**OPENING OF DAY 2:** Opening the day’s discussions, Rachel Kyte said that the momentum would continue after the Forum, with over 90 meetings scheduled to take place in Lisbon on Friday, 4 May.

**THE WAKE-UP CALL:** On Thursday morning, attention turned to what is needed to enable SDG 7 innovations to take off fast and at scale. Michael Liebreich, CEO, Liebreich Associates, shared his view of a world where a third of electricity comes from wind and solar, where a third of vehicles are electric, and that is a third more energy productive. He stressed that no conflict exists between energy efficiency, renewable energy and energy access targets. Drawing on a health project in Sierra Leone, he defined four challenges as: removing import tariffs on solar equipment; improving the efficiency of equipment; educating the development community on energy needs; and putting strong finance models in place.

### KNOWLEDGE INTO ACTION: SCALING

**INNOVATIONS:** On Thursday morning, practitioners engaged in three rounds of dialogues focusing on the nexus issues across the SDG 7 targets. The discussions addressed, *inter alia*, how data is driving innovative actions on the ground as well as how practitioners are addressing data challenges and what they can learn from each other.

**Part 1 - SDG Enablers: Mobile, Finance and Energy:** Introducing the first dialogue, Greta Bull, CEO, Consultative Group to Assist the Poor, said the session would address how mobile payments and data analytics have improved access to financial services and opportunities outside of electricity.

Thomas Gottschalk, CEO, Mobisol, called energy access the first step in development, explaining how customers have used data collected by Mobisol to prove they are reliable customers, allowing them to access credit. On challenges, he discussed unpredictable regulatory environments, finding skilled employees and exchange rate risk. He added that Mobisol has found passable terms for local currency finance, which can serve as a blueprint for replication in other places. While Mobisol products serve the “rich of the poor,” Gottschalk expressed hope that prices would drop in the near future to reach last-mile populations.



L-R: **Rana Adib**, Executive Secretary, REN21; **Alfredo Parres**, Group Senior Vice President, ABB; and **Gilles Vermot Desroches**, Sustainability Senior Vice President, Schneider Electric

**Part 2 - Utility of the Future:** Rana Adib, Executive Secretary, Renewable Energy Policy Network for the 21st Century (REN21), moderated this second dialogue, which featured speakers Alfredo Parres, Group Senior Vice President, ABB, and Gilles Vermot Desroches, Sustainability Senior Vice President, Schneider Electric. On challenges, Parres questioned the level at which renewable energy penetration causes problems for the power grid. Given the rapid growth of renewables, he questioned which new technologies will be necessary to run grid systems with a very high penetration of renewables.

Desroches explained how power grids and generation are changing, comparing the competition between “watermelons” (large, centralized generators) and “blueberries” (many distributed generators). He noted that in the past watermelons always won, but as generation is placed closer to where energy is needed, blueberries are becoming more common. He called for flexibility and innovation to accommodate systems of interconnected smaller generators, as well as capacity building for people to enter this field.

**Part 3 - Cooling:** Jürgen Fischer, President, Danfoss Cooling, and Nithya Ramanathan, CEO, Nexleaf Analytics, discussed vaccine and food cold chains and how to attain cooling for all, from buildings to people. They explained the challenges of keeping cooling constant, for instance from the production of a vaccine to its administration at the ‘last mile.’ They highlighted the need for energy efficiency, collecting and using data, looking at the cooling chain holistically and garnering feedback. They concluded that new business models are required to capture the real needs of the sector.



**Nithya Ramanathan**, Co-Founder and CEO, Nexleaf Analytics, and **Jürgen Fischer**, President, Danfoss Cooling



Announcement of the Shine campaign

**DISRUPTIVE VOICES: INNOVATIONS THAT ARE DRIVING CHANGE:**

Thursday’s Disruptive Voices featured three innovators. Lorien Gamaroff, CEO, Bankymoon, explained that energy access is not only about infrastructure, but it also about payment systems. He explained how, through the use of cryptocurrency, his company is reducing the cost of transactions, increasing security and convenience, and allowing payments for energy to be processed anywhere in the world.



Lorien Gamaroff, CEO, Bankymoon

Cathy Zoi, President, Odyssey, said that attaining significant growth towards SDG 7 requires new machinery, and

recalled inventions of the past, such as the printing press, which led to a dramatic increase in literacy. She described an open and secure software platform developed by Odyssey that brings together sector-specific experience and software engineering expertise.

Donald Sadoway, Professor of Materials Chemistry, Massachusetts Institute of Technology (MIT), described how his study of large-scale aluminum smelters that consume colossal amounts of power had inspired him to explore how to “run smelter in reverse” as a possible solution to the elusive goal of large-scale energy storage. He said that the first large-scale storage product based on this disruptive technology would be ready by 2020. He concluded that to bridge the energy gap, “batteries for Africa must be built in Africa by Africans using African resources,” and called for facilitative changes in investment rules and tax codes to unleash the patient capital needed.



Cathy Zoi, President, Odyssey



Donald Sadoway, Professor of Materials Chemistry, MIT

**SHINE ANNOUNCEMENT:** On Thursday morning, Rachel Kyte introduced the Shine campaign, which brings together faith organizations, philanthropists and the development community to provide the “steady streak” of innovative capital needed to meet SEforALL goals.

Highlighting that partners sometimes come from unexpected places, Lisa Jordan, Manager, Shine, announced that the initiative has 35 organizations worldwide who are making commitments to end energy poverty.

Shine campaign members announced pledges, including: a US\$2 million grant from the IKEA Foundation; a commitment of 1% of Global Wallace Fund assets to energy access; a pledge by the World Evangelical Alliance to power 20% of its infrastructure with 100% renewable energy within five years; and a US\$1 million investment from Oiko Credit in the cookstove company Inyenyeri. Golo Pilz, Brahma Kumaris, said 500 of its 5,000 centers in India are equipped with solar power and described a newly completed 1 MW solar thermal station that, with thermal storage, can run continuously for 20 hours.

**THE DEEP DIVES: Energy in Humanitarian Settings:** This session took place on Thursday morning and was moderated by Sheila Oparaocha, Programme Manager, ENERGIA. Panelists comprised: Simon D’Ujanga, Minister of State for Energy, Uganda; Andrew Harper, Director, Division of Programme Support and Management, The UN Refugee Agency; Michael Keating, Special Representative of the UN Secretary-General in Somalia; Tara Nathan, Executive Vice President, Public-Private Partnerships, MasterCard; and Andreas Spiess, CEO, SolarKiosk. Oparaocha invited the panel to offer perspectives from their respective institutional settings on how working with refugees and displaced people is changing the way we think about the delivery of modern energy solutions and the potential impact on achieving SDG 7.

Speakers noted that refugee camps provide a unique ecosystem for testing out innovative energy services due to their high density, huge energy budgets, institutional commitment to succeed and responsibility to serve surrounding host communities. The opportunity that this creates to link short-



term emergency relief with long-term development planning, in close collaboration with local and national governments and other stakeholders, was repeatedly emphasized. Many noted that humanitarian agencies have an opportunity to leapfrog to clean energy solutions, such as mini and micro grids.

With regard to technological innovations, panelists highlighted the use of mobile technologies and smart meters in opening up opportunities for energy entrepreneurs in camps, including women-owned businesses. Specific examples of this were presented from Mastercard's Smart Communities Initiative and Solarkiosk. Noting that this is the first time that this issue has been addressed at the SEforALL Forum, a representative from the Global Alliance for Clean Cookstoves pointed out that the lack of clean and safe energy in refugee camps is not only an environmental and security issue, but a nutrition issue as well. She called for stakeholders to scale up pilot projects and reported on the launch of a clean cooking fund to this end.

The discussions highlighted a number of outstanding issues, including the need to: build the capacity of budding entrepreneurs in the clean energy sector; develop learning platforms and alliances to aggregate data and identify best practices; and explore innovative financing models.

**Financing the Transition:** Mafalda Duarte, Manager, Climate Investment Funds (CIF), opened the panel, which took place on Thursday morning, and focused on how to “move from millions of dollars to billions and even trillions.” She highlighted positive developments, noting that in 2017 the world invested more in solar than in coal, gas and nuclear combined. She said change is both possible and underway to catalyze more action.

Asking panelists to focus on what is working well and how people in the room can make a difference, moderator Daniel Klier, Group Head of Strategy and Global Head of Sustainable Finance, HSBC, introduced: Teresa Ribeiro, Secretary of

State of Foreign Affairs and Cooperation, Portugal; Audrey Desiderato, Chief Operating Officer, SunFunder; Sam Parker, Director, Shell Foundation; and Howard Bamsey, Executive Director, Green Climate Fund (GCF).

Ribeiro recalled that 2015 was a landmark year for multilateralism in sustainable development, climate change and financing, stressing that these agendas are intrinsically linked. She stressed that multilateral development banks (MDBs) should be prepared to explore riskier contexts and collaborate rather than compete.

Desiderato explained that investing upfront in new companies and then growing together has worked well for SunFunder and reduces due diligence costs. She described successful models that start small and create specially-designed finance vehicles as the company progresses.

Parker highlighted that many of the “SDG businesses” under discussion are providing successful solutions at virtually no cost to governments. He proposed focusing on filling the US\$1 billion gap in growth capital, which can help “adolescent” companies that have proven their business credentials but are still struggling to secure finance.

In addressing some of the challenges, Bamsey said the GCF is specifically looking to take on risk in new geographies, technologies and financial instruments. Duarte underlined the CIF's mandate to promote collaboration among MDBs. Desiderato explained that building expertise in a specific technology and geographical market helps her company cope with risk.

**Catalyzing Decentralized Renewable Energy Markets:** This session took place on Thursday morning. Session moderator Harish Hande, Managing Director, SELCO India, invited participants to explore opportunities brought about by decentralized energy solutions, asking them to define what needs to be done to “move the needle” to attain SDG 7.



L-R: **Daniel Klier**, Group Head of Strategy and Global Head of Sustainable Finance, HSBC; **Teresa Ribeiro**, Secretary of State for Foreign Affairs and Cooperation, Portugal; **Audrey Desiderato**, Founder and COO, SunFunder; **Sam Parker**, Director, Shell Foundation; and **Howard Bamsey**, Executive Director, GCF

The panel included: Ashvin Dayal, Associate Vice President & Managing Director (Smart Power), Rockefeller Foundation; Isaac Kiva, Secretary for Renewable Energy, Ministry of Energy, Kenya; Meike van Ginneken, CEO, SNV Netherlands Development Organisation; Anya Cherneff, Executive Director, Empower Generation; Felice Zaccheo, Head of Unit, Sustainable Energy and Climate Change, Directorate-General International Cooperation and Development, European Commission; and Jaideep Bansal, Energy Access Leader, Global Himalayan Expedition.

Participants heard how the Rockefeller Foundation is prioritizing energy and discussed, *inter alia*, the need to: understand the market; focus on rural economies; involve public finance through subsidies, for instance; work with and stimulate the private sector; set policies; use integrated planning; and have long-term plans. They discussed: projects in Kenya and Nepal reaching out to the last mile; the importance of promoting women to positions of leadership in business; the opportunity of mixing energy projects with tourism; the importance of capacity building; and the use of results-based financing to create markets.

Putting the realities of being a local entrepreneur into perspective, they talked about: access to soft capital, donor funds and “failure capital”; tracking progress to chart direction; and the importance of the human dimension of projects. They concluded that the overall target should be universal access to energy for all and stressed the need to reach out to non-energy constituencies.

**CLOSING SESSION:** On Thursday afternoon, Rachel Kyte asked leaders to take stock and articulate their take home messages.

Hajia Alma Mahama, Minister of Local Government and Rural Development, Ghana, said she would take home the passion of the event’s participants. She stressed the need to empower women and support them in becoming entrepreneurs, both in the area of clean cookstoves and more broadly across the energy sector.

Highlighting the GEF’s role within the energy sector, Naoko Ishii, CEO, Global Environment Facility (GEF), spoke of leaving Lisbon with hope and seeing the “glass half full” even though SDG 7 is not on track.

Upendra Tripathy, Interim Director-General, International Solar Alliance, underlined the importance of using a mix of financial support and creating bankable projects.

Expanding on his company’s journey to gender equality, Bjarni Bjarnason, CEO, Reykjavik Energy, called on boards to put pressure on CEOs to execute gender equality, as it not only is a human right, but it also increases all-round job satisfaction.

In concluding remarks, Kyte thanked all stakeholders for their work and congratulated them for moving the conversation from one that just focused on energy to one that is also about healthcare, jobs, education, businesses and prosperity overall. She acknowledged diverse leaders from government, finance, civil society, service providers and international organizations who had made new commitments covering, among others, electricity connections, clean fuels, clean cooking, off-grid energy, mobilization of faith communities, the displaced and refugees, and financial resources.

#### **PARTNER WORKING SESSIONS**

During the two-day Forum, participants convened in 18 Partner Working Sessions, which were organized by SEforALL partners and aimed at catalyzing action on specific issues that will enable progress on SDG 7. The following section highlights discussions from a selection of the Partner Working Sessions.

#### **THE ENERGY ACCESS DIVIDEND – DATA THAT INFORMS AND INFLUENCES POWER FOR ALL:**

Panelists at this Wednesday session, which was moderated by Rebekah Shirley, Power for All, were: Leslie Labruto, Acumen; Marc Jeuland, Associate Professor of Public Policy and Global Health, Duke University; Vivian Vendeirinho, Founder and Managing Director, RVE.SOL; Linda Davis, Director of Partnerships, wPOWER Hub; and Heather Adair-Rohani, Team Leader on Household Energy and Health, WHO.

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L-R: Rachel Kyte, CEO, SEforALL; Hajia Alima Mahama, Minister for Local Government and Rural Development, Ghana; Bjarni Bjarnason, CEO, Reykjavik Energy; Naoko Ishii, CEO, GEF; and Upendra Tripathy, Interim Director-General, International Solar Alliance



L-R: **Marc Jeuland**, Associate Professor of Public Policy and Global Health, Duke University; **Vivian Vendeirinho**, Founder and Managing Director, RVE.SOL; and **Linda Davis**, Director of Partnerships, wPower Hub

Discussing “what we already know,” panelists described efforts to capture the impact of energy access initiatives. Labruto described how her company’s Lean Data platform was created in response to the need for a low-cost and low-tech way for energy access companies to understand how their products and services are affecting customers’ lives. She gave the example of how cookstove users were found to “stack” new, clean cookstoves with other, unclean technologies, often reverting back to traditional cooking methods.

Jeuland described the Sustainable Energy Transitions Initiative literature review, which clearly distilled the positive and negative impacts of different forms of energy for the achievement of relevant SDGs.

On what “we do not know,” panelists pointed to the absence of gendered nuances, such as which gender benefits most from a new technology, and the lack of data around healthcare facilities’ access to energy. Others questioned how to simplify the process of capturing “soft” data related to customers’ feelings and called for aligning the questions asked to allow for data comparison across geographies and projects.

On challenges to “using what we do know,” many noted the importance of translating data into a form of argument that captures the attention of companies, financiers and government agencies focused on non-energy sectors. They pointed to cases where a trade-off exists between high positive impacts and financial stability, adding that action should be taken in areas even where little evidence exists because “trying is how learning happens.” Expressing frustration that the focus often gets stuck on new technologies that are not full-scale solutions, Davis called for “de-costing” existing solutions.

Closing the session, Shirley announced that Power for All would launch the Platform for Energy Access Knowledge (PEAK), a data aggregator, at the end of May 2018.

**DATA THAT DRIVES SDG 7: EMERGING FINDINGS FROM THE GLOBAL ENERGY ACCESS SURVEY:** Vivien Foster, World Bank, moderated this session on Wednesday, noting that the Global Energy Access Survey is based on a multi-



**Dana Rysankova** and **Elisa Portale**, Senior Energy Specialists, World Bank Group

tier framework (MTF) that captures the dimensions of service that really matter, and highlighted that Rwanda, Cambodia and Ethiopia have completed it.

Riccardo Puliti, Dana Rysankova and Elisa Portale, World Bank, presented on the MTF, drawing attention to the criteria used to measure electrification, such as capacity and reliability, and household cooking solutions, such as fuel availability and cookstove efficiency. They provided details from the three countries having completed the survey and drew attention to the upcoming MTF website and data repository.

The panel included: Germaine Kamayirese, Minister of State for Energy, Water and Sanitation, Rwanda; Mekalia Paulos, UN Economic Commission for Africa; Carola van Rijnsoever, Ministry of Foreign Affairs, the Netherlands; Zhihong Zhang, Senior Program Coordinator, CIF; and Annemarije Kooijman-van Dijk, Coordinator of the Gender and Energy Research Programme, ENERGIA.

Participants discussed how the MTF: uses binary data; is a tool that can be integrated into national statistics and planning as it is a results-focused, evidence-based monitoring framework; and can feed into policy. They noted it highlights gaps and where progress is lacking, and can be used by civil society to stimulate national debate on where to invest money. Drawing attention to a WHO report that finds air pollution kills seven million people a year and over three million die from household pollution, they called for using the guidelines to define how health hinges on clean energy use.

**CLEAN COOKING FUELS FOR ALL: MOVING BEYOND THE IMPROVED STOVE:** This session was co-organized by a range of partners, including the Global Alliance for Clean Cookstoves, Global LPG Partnership, Hivos Foundation, SNV Netherlands Development Organisation, World LPG Association and Free the Marginalized Women Advocates.

Introducing the session on Wednesday, moderator Richenda Van Leeuwen, Global LPG Partnership, said it would bring various voices to the table. Participants then met in breakout sessions to address issues related to: policy; investment;



Participants exchange views during breakout groups

innovations; lessons learned on ensuring community impact; and market assessment and pathways. At the close of the session, the groups presented insights and recommendations to scale up clean cooking.

The policy group highlighted some “shoulds and musts” including the need to: harness market forces in favor of clean cooking; ensure that solutions meet the needs of government and markets; break down policy silos; build public awareness on both the demand and supply sides; and make progress towards affordability.

The financing and investment group highlighted the complexity of the sector and significant lack of de-risking instruments and impact investors. They called for: investing in learning for all stakeholders; patient investors with long-term commitment to scale up; a move from giving away free technologies toward funding disruptive innovations; and supporting systemic solutions.

The innovation group called for: involving more stakeholders in research and development, including enterprises and users; exploring ways to scale up biogas and marketing the technology to also manage waste; and developing common marketplaces for multiple technology solutions.

On lessons learned, the group highlighted the importance of carrying out reality checks, such as whether the solution has been used over time, the importance of including maintenance in the design, and striving to reach different audiences.

The market pathways group highlighted the need for: a holistic market system approach that is not tied to one fuel or technology; exploring low-hanging fruits; working on “less than perfect” intermediate solutions; using results-based financing to scale up; and focusing on sustainability.

**ENABLING JOBS WITH ENERGY: OPPORTUNITIES, CHALLENGES AND ONGOING ACTIVITIES:** On Wednesday, Fiona D. Wollensack, Africa-EU Energy Partnership Secretariat, moderated the session, underscoring the role of the energy sector in creating jobs. The panelists were: Felice Zaccheo, European Commission; Mosad Elmissiry, New Partnership for Africa’s Development; Karin Reiss, Southern African Development Community Centre for Renewable Energy and Energy Efficiency (SACREE); Rebecca Symington, Mlinda Foundation; and Farai Evans Chabata, Youth in Energy.

Discussions focused on an array of energy-related projects taking place in Africa, like the energy transmission lines being established across the continent, and how they touch many other sectors such as health, education and agriculture. They focused on regional collaboration and cooperation on energy through regional economic communities in Africa, and heard about work on mini grids in India.

Participants discussed boosting the capacity of women in the energy sector, supporting entrepreneurs in scaling up their businesses, and how energy could bring jobs to the most remote areas where unemployment is high. They stressed the need for a regulatory framework and for an enabling environment to properly engage with the private sector and promote employment, including direct, indirect and induced jobs that improve livelihoods.

Participants also debated the availability of a skilled workforce in Africa, problems with bringing external consultants instead of building local capacity through training, and



L-R: **Fiona D. Wollensack**, Africa-EU Energy Partnership Secretariat; **Felice Zaccheo**, European Commission; **Mosad Elmissiry**, New Partnership for Africa’s Development; **Karin Reiss**, UN Industrial Development Organization Sustainable Energy Expert, SACREE; **Rebecca Symington**, Mlinda Foundation; and **Farai Evans Chabata**, Youth in Energy

difficulties in retaining trained workers. They discussed giving more opportunities to youth and enabling young entrepreneurs to access funding. They also noted the importance of involving local communities, ensuring national content, and modifying donor agreements to support local contracting and technology transfer.

On funding, they discussed options, such as grants, loans and blending with development banks and financing institutions. On project design, they stressed the need to focus on productive use, with energy used as an enabler to reach other goals, and noted that the low level of local equipment production should be taken into account.

**LAST MILE FIRST: MAXIMIZING THE IMPACTS OF ENERGY ACCESS ON THE SDGs:** This session was moderated by Davida Wood, World Resources Institute, on Wednesday. Speakers were: Isaac Kiva, Ministry of Energy, Kenya; Rianne Teule, SNV Netherlands Development Organisation; Sarah Wykes, Catholic Agency for Overseas Development; Andrew Scott, Overseas Development Institute; Katrina Pielli, Power Africa, USAID; Luc Severi, UN Foundation; Ben Garside, International Institute for Environment and Development; and Julien Jacquot, Group for the Environment, Renewable Energy and Solidarity.

On data gaps, panelists highlighted, *inter alia*, the need for more comprehensive studies of future energy demand; and the role of government policy in stimulating demand, such as Kenya's decision to electrify all primary schools and health centers, which led to the rapid electrification of adjacent rural areas.

On the role of community-level energy planning, Teule presented a case study of a joint project by SNV and Practical Action in Zambia, noting it had adopted an integrated approach to determine a range of related needs, including water availability, systems for delivering energy, and business and financial models. She reported that four business models were subsequently developed, ranging from energy kiosks at the community level to mini grids serving larger business areas and multiple energy needs, as required by irrigation, schools and health centers.



Participants during the event on "Last Mile First: Maximizing the Impacts of Energy Access on the SDGs"

Highlighting lessons learned, Garside emphasized: letting communities choose; using energy needs, rather than available technologies, as the starting point; and exploring energy delivery models that factor in environmental and social costs and benefits.

With regard to financial solutions to maximize off-grid solutions, participants highlighted, *inter alia*: linking distribution of solar pumps for farmers with income generating activities, such as beekeeping; promoting value-added services for remote villages, such as eco-tourism and ICT hubs; and exploring ways to address the challenges of cross-subsidization as a mechanism to provide affordable energy for the poorest consumers. While one speaker noted that multinationals are increasingly looking at how to work with under-served populations, several acknowledged that reaching the last mile will require multi-stakeholder partnerships and capacity-building support to develop viable local energy enterprises and address gender gaps in a meaningful way.

**UNLOCKING ENERGY EFFICIENCY FINANCE FOR HIGH-IMPACT AREAS:** This Wednesday session was moderated by Steve Kukoda, International Copper Alliance, who called finance the single largest barrier to deploying energy efficiency at the scale needed to achieve the Paris Agreement goals. The panelists were: Lily Riahi, UN Environment; Ariel



L-R: Lily Riahi, Advisor on Sustainable Cities, UN Environment; Amadou Thierno Diallo, Director of Global Practices, Economic and Social Infrastructure, Islamic Development Bank; Steve Kukoda, Vice President, International Copper Alliance; Mark Lister, Head of the Copenhagen Centre on Energy Efficiency; and Ariel Yopez, Chief of the Energy Division, Inter-American Development Bank

Yepez, Inter-American Development Bank; Mark Lister, Head of the Copenhagen Centre on Energy Efficiency; and Amadou Thierno Diallo, Islamic Development Bank.

Lamenting that the vast majority of developing countries lack efficiency standards for products, Kukoda opined that financial institutions should make such standards a prerequisite for receiving energy financing. He called for speaking the “right language” to the finance community, shifting the response to traditionally non-bankable projects from “no” to “not that way,” and getting creative to make them financeable.

Panelists described how two SEforALL initiatives, District Energy in Cities and the Copenhagen Centre on Energy Efficiency, are working to make projects bankable. The former is closing the gap in project identification and creating enabling policy environments, while the latter is working to scale projects to reduce transaction costs, such as by aggregating 40 Argentinian cities that want efficient LED street lighting.

Representatives from development banks described efforts to finance energy efficiency projects, noting that even when money is available, it is often left on the table, sometimes due to risk perception by those who are eligible to adopt new technologies. They emphasized standardization through governance structures so that developing countries do not end up with rejected appliances that fail to meet other countries’ standards.

Participants discussed resources for project preparation, ways to promote energy efficiency through the “sexier” lenses of energy access and clean energy, and the importance of national governments. One panelist noted that energy subsidies have negative impacts on efficiency, and that while many governments support energy efficiency in theory, efforts to remove market distortions are often thwarted by political implications.

**PROMOTING GENDER INTEGRATION THROUGH POLICY REFORM:** On Thursday, Sheila Oparaocha, ENERGIA, session moderator, underscored the importance of an enabling policy environment when mainstreaming gender into energy policies and drew attention to SDG 5 on gender equality.

Panelists were: Ana Victoria Rojas, Global Gender Office, International Union for Conservation of Nature (IUCN); Monica Maduekwe, Economic Community of West African States (ECOWAS) Centre for Renewable Energy and Energy Efficiency (ECREEE); Karin Reiss, SACREEE; Iliyana Arnaudova, Regional Center for Renewable Energy and Energy Efficiency (RCREEE); and Ellen Morris, Sustainable Energy Solutions. Alexis Tubb, Clinton Foundation, led an interactive roundtable session.

Participants discussed research on gender considerations in energy policies, including a new IUCN and USAID report, ‘Advancing Gender in the Environment: Making the Case for Women in the Energy Sector.’ They called for gender budgeting, pointing to few examples of supportive policy frameworks for female participation and representation in the energy sector. They discussed: regional experiences in Africa and Arab countries; the importance of regional organizations, such as ECOWAS; and how gender mainstreaming is carried out in different geographical areas. They described lessons learned in the policy development process, including the need for: capacity building and awareness raising; work on collecting data; involving local entities; and working with women in refugee camps.

Participants were walked through a ‘blueprint’ defining the different steps in mainstreaming gender into energy policies, before taking part in an interactive session on: how regional organizations can increase women’s entrepreneurship; ways to increase their participation and employment in the energy sector; boosting networking; getting non-energy stakeholders to support energy gender policies; and how to prioritize gender-relevant information when collecting data. Delegates concluded: there is no “one size fits all” solution; women need to be encouraged to engage; and success stories need to be compiled to demonstrate that gender policies bring benefits.

**ENERGIZING FINANCE: BARRIERS AND OPPORTUNITIES TO UNLOCK FINANCE FOR ENERGY ACCESS:** This Thursday session was moderated by Barbara Buchner, Climate Policy Initiative, who introduced



L-R: Sheila Oparaocha, ENERGIA; Ana Victoria Rojas, Global Gender Office, IUCN; Monica Maduekwe, ECREEE; Karin Reiss, SACREEE; Iliyana Arnaudova, RCREEE; and Ellen Morris, President and Founder, Sustainable Energy Solutions



Panelists during the session on: Energizing Finance: Barriers and Opportunities to Unlock Finance for Energy Access

the first panel consisting of: Lucy Stevens, Practical Action; Rita Poppe, Hivos; Luís Costa, Get2C; Abyd Karmali, Bank of America; Andrew Reicher, SunCulture; Tinashe Makoni, Africa GreenCo; Michael Hoelter, Deutsche Bank; and Jessica Stephens, African Mini-Grid Developers Association.

Panelists addressed why many funds committed to energy access are as of yet unallocated and how to free up this blockage. They identified such difficulties as: meeting conditions to qualify for a loan; the amplification of barriers for women; and a focus on blended finance that does not always work for those areas most in need. Panelists noted the low appetite among investors for risk associated with renewable energy in emerging markets and early stage projects, with one calling for greater risk tolerance, patience and willingness to accept modest returns.

Panelists described examples of viable solutions, including the Renewable Energy Scale-Up Facility, an initiative that aims to bridge the mismatch between what investors want and the type of projects in need of finance, and the Green Aggregation Tech Enterprise, an entity under development that will provide credit support and income protection for mini-grid developers. Panelists were also straightforward about the need for grant funding and subsidies, including regulatory subsidies.

The second panel included: Dimitry Gershenson, Facebook; Marcel Raats, RVO.NL; Jill Marcari, Omidyar Network; Najada Kumbuli, Calvert Impact Capital; and Surabhi Rajagopal, ACCESS Coalition and SELCO Foundation. They described approaches that provide grants without distorting the market, such as through interest accrual, and results-based financing frameworks that enhance the quality and professionalism of the sector. One panelist noted that not every business has to be a winner, as “that is how a sector grows.” Other panelists recognized that pay as you go is a capital-intensive process that not all entrepreneurs in Africa can access, and that for venture capital to be able to recycle its funds, exits must also be established.

**COOLING FOR ALL – CREATING MARKETS FOR SUSTAINABLE COOLING SOLUTIONS:** This Thursday session was moderated by Alan Miller, Independent Consultant. Panelists were: Xiao Wang, Copenhagen Centre on Energy Efficiency; Toby Peters, University of Birmingham; Julia Panzer, Danfoss; and Lily Riahi, UN Environment.

Miller invited panelists to provide brief perspectives on key challenges in cooling sectors, focusing on a number of cluster areas, including: appliances; buildings and urban settings, including district cooling; data centers; and cold chains.

On appliances, Panzer noted that satisfying the huge unmet global demand requires addressing needs across the value chain. The contribution of district cooling solutions in reducing energy demand in cities, especially when combined with thermal storage, was highlighted. Riahi cited data showing that centralizing cooling can lead to 30% reductions in energy costs, create investment opportunities in renewables and significantly reduce the use of polluting refrigerants, as shown in case studies from Paris and Colombia.

Noting that large data centers consume huge amounts of energy to cool down their equipment, she highlighted the need for specific research and knowledge exchange to enhance sustainable energy use in this sector.

Discussing some of the issues emerging from these new technologies, participants noted that like any utility, district cooling requires a regulatory framework, which will need to be based on comprehensive planning, as well as the formulation of targets to raise political visibility and attract private sector participation.

Peters referenced IEA projections, which show that fully meeting the demand for cooling would lead to a massive jump in energy use. He noted that disruptive technologies will be required to address such demand in a sustainable way.

## EMPOWERING WOMEN: PATHWAYS FOR UP-SCALING WOMEN-CENTRIC APPROACHES TO ENERGY ACCESS:

This Thursday session was moderated by Soma Dutta, ENERGIA. Panelists included: Katherine Lucey, Solar Sister; Rachel Mahmud, Global Alliance for Clean Cookstoves; Stephanie Finigan, Value for Women; Chebet



**Chebet Lesan,**  
Founder and CEO,  
BrightGreen

Lesan, Founder and CEO, BrightGreen; and Maria Lee, Women Organizing for Change in Agriculture and Natural Resource Management. The panel identified and expanded on important ingredients for a woman's empowerment journey, including mentorship and training, leadership and agency to make and implement decisions, networks and peer support, and enabling environments. They described how the skills learned from trainings would be ephemeral if not for women coming together and supporting each other.

Panelists addressed reaching last-mile populations through a gender lens. Clarifying that such communities can differ significantly, Lucey said "last mile" should be defined holistically by three criteria: poverty level, remoteness and energy access. She noted, for instance, that assuming all last-mile populations are rural leaves out many living in slums in densely urban areas that lack access to energy and are unlikely to achieve it soon.

Speakers called for also focusing on social returns, rather than solely on financial returns. Lee outlined how the newly developed W+ Standard measures outcomes to provide investors with assurance of women's empowerment social returns. Several participants commented on the effectiveness of raising awareness among men that empowering women makes business sense, and noted that with training, male salespeople will be more likely to approach women as customers, more women will become buyers, and, in turn, the company will be more likely to successfully hire and retain female salespeople. Another cited research showing that tweaking language to reach users (women) rather than purchasers (men) of a product, the company was able to reduce the number of technical support calls by 33%.

Women entrepreneurs from Africa described their experiences growing businesses in difficult environments, explaining how they are working to overcome embedded cultural connections to old technology, uncertain policy frameworks, competition from foreign imports and challenges with traditional commercial banks.

**ENERGY AND HEALTH: BUILDING BRIDGES:** Donee Alexander, Global Alliance for Clean Cookstoves, introduced this session on Thursday, suggesting looking at energy and health in a holistic manner. Maria Neira, WHO, highlighted the links between health and energy, noting the former requires the latter. She said the health argument, such as in the deaths caused by pollution and cooking stoves, is the strongest argument to further SDG 7.

Session moderator Jem Porcaro, UN Foundation, asked participants for their views on linking the two topics and advancing their respective goals in tandem.

Panelists were: Laura Stachel, We Care Solar; Joshua Rosenthal, US National Institutes of Health; Jonathan Phillips, Duke Nicholas Institute for Environmental Policy Solutions;



**Marcel Raats,** RVO.NL, and **Jem Porcaro,** UN Foundation

Neha Misra, Solar Sister; Aliysha Mayfield, Partners in Health; Robert MacIver, UK Department for International Development (DFID); Abhishek Jain, Council on Energy, Environment & Water, India; Richard Hughes, Johns Hopkins Program for International Education in Gynecology and Obstetrics; Inger Anette Sandvand Dahlen, Norwegian Agency for Development Cooperation; Håkan Björkman, UN Development Programme Global Fund Partnership; and Marcel Raats, RVO.NL.

Participants noted that problems are multisectoral, explained that solutions need to be interwoven across the different sectors, and called for cooperation and innovation. They highlighted financing, where private sector investment needs to be coupled with grant money, and the issues related to longevity of technology and related maintenance. They drew attention to those working at the last mile, such as mobile healthcare workers. They discussed available data to make the case that energy is pivotal in securing health and the importance of technological advances in securing data. Participants also spoke about the types of energy used for cooking, the benefits of using LPG, biogas or ethanol to reduce health impacts, and the possibility of cooking with electricity. They stressed the need to aggregate information into a compelling narrative and the importance of capacity building to ensure locals become experts.

## **BUILDING CAPACITY AND COORDINATION AROUND ENERGY SYSTEMS PLANNING AND MODELLING:**

This Thursday session, which was moderated by William Blyth, DFID, began with a presentation of experiences from Rwanda and Nigeria, followed by a panel discussion with institutions involved in building planning capacity at the national level. The panelists were: Robert Nyamvumba, Ministry of Infrastructure, Rwanda; Faruk Yusuf Yabo, Ministry of Power, Nigeria; Vijay Modi, Columbia University; Deb Chattopadhyay, World Bank; Elizabeth Press, IRENA; and Daniel Schroth, African Development Bank.

Discussing lessons learned, speakers emphasized: the need to incorporate planning for energy services, not just for kilowatt hours; engaging with users and organizations on the ground to identify technologies that offer the most value for money; integrating a range of energy solutions to address environmental, social and technological challenges; incorporating transport and other relevant sectors; and promoting simple, modular and interoperable solutions to encourage scaling.



On challenges, the discussions highlighted the difficulty of fully quantifying energy demand from different sectors, including household, agriculture, processing, health and education, and the variable quality of consulting support available to governments.

Speakers reiterated that planning processes are most likely to succeed when the request comes from the recipient country, which signals the need for development agencies to raise awareness of the kinds of support available to trigger demand.

## UPCOMING MEETINGS

**Regional Political-Technical Dialogue on Water, Energy and Food Nexus:** This event will look at the nexus concept, its connection to the SDGs, its features in Latin America and the Caribbean and difficulties in implementing it, national case studies and regional priorities. **dates:** 14-15 May 2018 **venue:** Economic Commission for Latin America and the Caribbean headquarters **location:** Santiago, Chile **www:** [water-energy-food.org](http://water-energy-food.org)

**Vienna Energy Forum 2018 Special Session:** This Special Session will focus on SDG 7. **dates:** 14-16 May 2018 **location:** Vienna, Austria **www:** <https://www.viennaenergyforum.org/>

**Energy Efficiency Global Forum (EE Global) 2018:** This event will meet under the theme ‘Energy efficiency: Innovation, Investment, Impact’ and will kick off Nordic Clean Energy Week. The event will highlight, *inter alia*: energy efficiency on the international stage; and how to speed the transfer of successful energy efficiency practices to the developing world, so that uptake is accelerated towards the SDGs. The Forum is being co-organized by the Alliance to Save Energy and the Copenhagen Centre on Energy Efficiency, and supported by the Danish Ministry of Foreign Affairs. **dates:** 21-22 May 2018 **location:** Copenhagen, Denmark **www:** <http://eeglobalforum.org/>

**Ninth Clean Energy Ministerial (CEM9):** CEM9 will focus on promoting the green transition. CEM focuses on practical cooperation, the exchange of good ideas and experiences within green solutions, and private sector involvement. In addition, the Third Mission Innovation Ministerial will take place at Malmö Live on 23 May 2018. **dates:** 22-24 May 2018 **location:** Copenhagen, Denmark **www:** <https://www.cem9-mi3.eu/>

**UNLEASH SDG Innovation Lab 2018:** This event will design and deploy scalable solutions for the SDGs. There are eight themes for “SDG talents” to work on at this year’s Innovation Lab, including SDG 7. **dates:** 30 May - 6 June 2018 **location:** Singapore, Singapore **www:** <https://unleash.org/innovation-lab-2018/>

**European Sustainable Development Week (ESDW) 2018:** ESDW is a European-wide initiative to stimulate and promote activities, projects and events that further sustainable development and the SDGs. **dates:** 30 May - 5 June 2018 **location:** TBA **www:** <https://www.esdw.eu/>

**Global Solutions Summit 2018:** The Global Solutions Summit 2018 will focus on the theme, ‘From the Lab to the Last Mile: Technology Deployment Business Models for the SDGs.’ This event will precede and complement the Third Annual STI

Forum (the Multi-stakeholder Forum on Science, Technology and Innovation for the SDGs), taking place from 5-6 June. **date:** 4 June 2018 **location:** New York, US **www:** <http://www.globalsolutionssummit.com/>

**G20 Energy Transitions Ministerial Meeting:** This event will take place as part of the Sherpa Track for the 2018 G20 Leaders’ Summit, which Argentina is hosting at the end of 2018, under the theme ‘Building consensus for fair and sustainable development.’ The meeting will address the future of work, infrastructure for development and a sustainable food future. **date:** 15 June 2018 **location:** Bariloche, Rio Negro, Patagonia, Argentina **www:** <https://g20.argentina.gob.ar/en/calendar>

**High-level Political Forum on Sustainable Development (HLPF) 2018:** The sixth session of the HLPF 2018 will meet under the theme ‘Transformation towards sustainable and resilient societies.’ The sub-set of SDGs to be reviewed in depth includes SDG 7 (affordable and clean energy). A three-day ministerial meeting will convene from 16-18 July, as part of ECOSOC’s high-level segment. **dates:** 9-18 July 2018 **location:** New York City, US **www:** <https://sustainabledevelopment.un.org/hlpf/2018>

**G7 Environment and Energy Ministers:** The G7 Environment and Energy Ministers will meet on the theme of ‘Working together on climate change, oceans and clean energy.’ To feed into this meeting, Canada will host the ‘Women Leaders Kicking It on Climate Summit.’ The 2018 G7 Leaders’ Summit will convene under the presidency of Canada in Charlevoix, Quebec, from 8-9 June 2018. **date:** 1 October 2018 [tentative] **location:** Canada **www:** <https://g7.gc.ca/en/g7-presidency/events-calendar/>

**Fifth SEforALL Forum:** The date and details for the fifth SEforALL Forum are expected to be released prior to the July 2018 HLPF meeting. **date:** TBD **location:** TBD **www:** <https://www.seforall.org/events>

## GLOSSARY

CEO	Chief Executive Officer
CIF	Climate Investment Funds
DFID	UK Department for International Development
IEA	International Energy Agency
IRENA	International Renewable Energy Agency
LDC	Least developed country
LPG	Liquefied petroleum gas
MTF	Multi-tier framework
SDG	Sustainable Development Goal
SEforALL	Sustainable Energy for All
UNGA	United Nations General Assembly
USAID	United States Agency for International Development
WHO	World Health Organization