

# Energy Access Review

## *The 600 million people question*



In any subject matter there are common narratives that are repeated so often that they are eventually accepted and assumed to be fact. Take the classical case of Kibera slum in Nairobi. After the first world war, the British government rewarded the Nubian soldiers under the King’s African Rifles with land on a 2.4 sq. km forest area which later grew into what is present day Kibera – a distortion of the Nubian word “*kibra*”, meaning forest or jungle. Up until 2010, and only after the comprehensive national population census of 2009, the population of Kibera (also infamously known as the largest slum in Africa) was commonly quoted as being between one and two million. The census outcome put the number at only 170,070 persons. Even well-meaning global institutions overestimated and miscommunicated this fact with UN Habitat, for example, estimating the population to be between 400,000 and 700,000 in 2005<sup>1</sup>. Media and NGOs picked this cue and continued to propagate this number and soon it grew to be in the millions. Paul Currion in his essay, “Lies, damned lies and you know the rest” sees it this way - *“In the absence of actual data (such as an official census), NGO staff make a back-of-envelope estimate in order to plan their projects; a postgraduate visiting the NGO staff tweaks that estimate for his thesis research; a journalist interviews the researcher and includes the estimate in a newspaper article; a UN officer reads the article and copies the estimate into her report; a television station picks up the report and the estimate becomes the headline; NGO staff see the television report and update their original estimate accordingly”*. Criticizing development institutions however missed the point completely. The reality is, like in Kibera, there is a prevalent lack of empirical data on development issues in Africa and until there are deliberate efforts to obtain this data – like the 2009 census, best guesses will dictate the rules of engagement.

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**Figure 1: Aerial view of Kibera (Schreibkraft, 2000)**

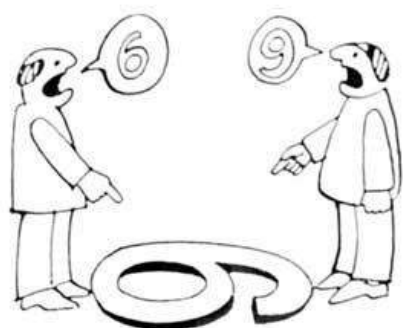


**“There is a prevalent lack of empirical data on development issues in Africa and until there are deliberate efforts to obtain this data, best guesses will dictate the rules of engagement.”**

<sup>1</sup> UN Habitat (2005), Kibera social and economic mapping: Household survey data: Government of Kenya and UN Habitat

A common number that is set as mantelpiece in many energy access reports is that 600 million Africans have no access to electricity <sup>1</sup>. There are three common shaky suppositions associated with this number. First, electricity access in Africa is seen through a binary mindset that has everyone either on-grid or off-grid. Second, low electrification rates are attributed to low generation capacity and hence the justification for mega generation projects now common in many Sub Saharan African countries. Third, that policy – either a lack of, or failure in effective implementation plays the biggest role in holding back this large population from attaining modern forms of energy. In this review, we do not attempt to approve or dispute this 600 million number but rather briefly discuss these three points with the aim of provide additional context to this electrification discussion.

**Figure 2: Sixes and nines (John Elkington, 1988)**



### The binary on-grid and off-grid mindset

The energy access dialogue often assumes that the majority of unelectrified households are off-grid, implicitly referring to regions that cannot practically be connected to a central national/regional grid due to cost, remoteness or other reasons. Most energy access interventions are structured within the on-grid and off-grid dichotomy, with off-grid areas receiving more of the development attention. Global initiatives including the US Government *Power Africa*, UK DfID *Energy Africa*, UN led Sustainable Energy for All (SE4ALL), Norwegian Government Energy + Partnership, are structured around on-grid and off-grid solutions. Empirical evidence is now emerging that a significant portion of those unelectrified in Africa actually live in areas that

are already served by the main electricity grid. The concept of being under-grid is gaining traction. In Kenya, it is estimated that 70% of the population live within 1000 meters of the national grid <sup>2</sup>. Figure 3 below illustrates the under-grid problem in Busia County in Kenya. Circles, squares and triangles represent households, businesses and public facilities respectively. Yellow represents those that are connected and other colors represent those that are not. The letter “T” at the center is the transformer and the white band around the area is a 600m radius from the transformer. Only 18 households out of a total 140 households within the 600m radius are connected representing a connectivity rate of just under 13%. In this instance more than 87% households are considered under-grid. The Ministry of Energy and Petroleum (Kenya) with support from the

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### 87% Under-grid

“Only 18 households out of a total 140 households within the 600m radius are connected representing a connectivity rate of just under 13%.”

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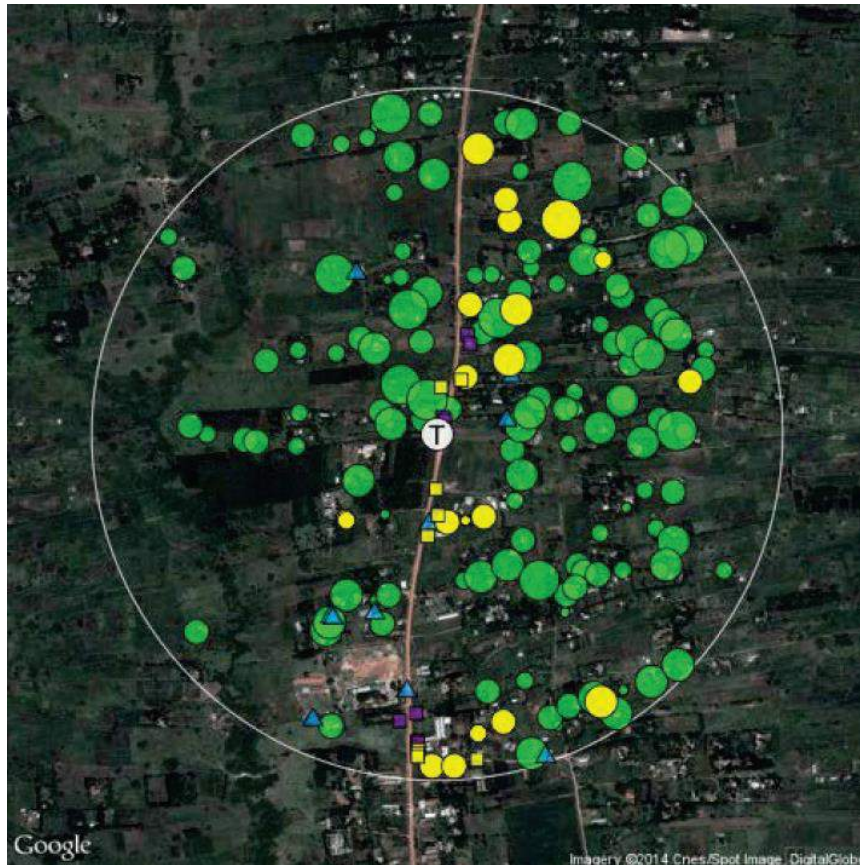
<sup>1</sup> AfDB 2016 report “The new deal on energy in Africa” puts this number at 645 million Africans.

<sup>2</sup> Pothering J., (2016) *Random Access*, article discussing the University of California Berkeley “Rural Electric Power Project”.  
[Extracted online in April 2016.](#)

African Development Bank and the World Bank launched the Last Mile Project which begins to address this problem. We expect the under-grid

problem to feature more prominently in various energy access discussions going forward.

Figure 3: The under-grid problem – a community in Busia county, western Kenya (Source: Lee, K. et al 2014)



- **“T” at the center:** Transformer
- **White barrier:** 600-meter radius from the transformer
- **Green circles\*:** Unconnected households
- **Blue triangles:** Unconnected public facilities
- **Purple squares:** Unconnected businesses
- **Yellow circles\*:** Connected households
- **Yellow triangles:** Connected public facilities
- **Yellow squares:** Connected businesses
- **\*Household markers scaled by the number members per household**

In Kenya, it is estimated that 70% of the population live within 1000 meters of the national grid

### Low electrification rates are due to low generation capacity

Many African countries have mega generation projects lined up for the near to medium term. Ghana plans to increase the generation capacity to top 5,000 MW by 2016; Nigeria has a Vision 2020 target of 40,000 MW; Rwanda seeks to expand its power generation base through domestic and imports to 563 MW by 2018; Ethiopia had a target of 10,000 MW by end of last year (2015); Angola seeks to quadruple generation from the current 2,000 MW to 9,500

MW in 2025; Kenya has a target of realizing 5,000 MW by end of 2016 from a base of 1,800 MW in 2013. These are few example of projects. Many of these projects are oversized as they assume that the low electrification rate is primarily a question of generation. We find that, for example, only an additional 1,000 MW in the case of Kenya will be sufficient to meet the needs of all the unconnected households. While the average cost of generating power for one household under a national utility network in Kenya is about US\$ 342, the cost of connecting the same household is

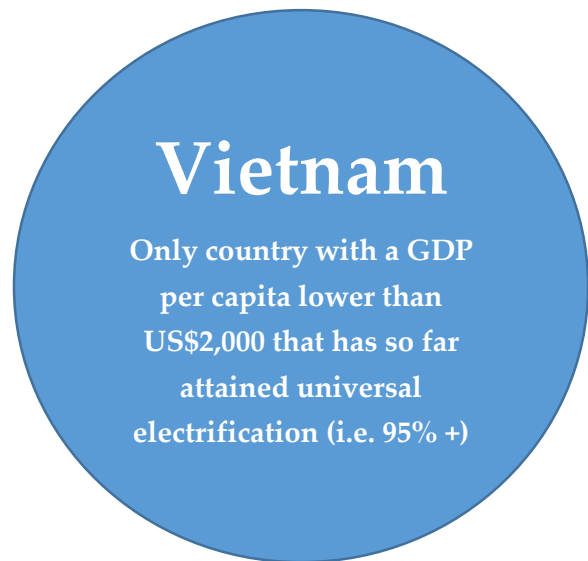


above US\$ 1,100<sup>3</sup>. Greater emphasis and deliberation needs to be placed on transmission and distribution especially frameworks that will promote private sector investment. So far feed-in tariff policies and standardized power purchase agreements have opened spaces for private sector investment in generation but transmission and distribution still remains the domain of the public sector.

### The problem is (lack of) policy!

Graphs showing correlations between electrification rates and economic growth are common. We do find that the relationship is not always causal but that, in some instances, economic growth drives the electrification rates. Economic growth generally translates to higher incomes per households. We find that income per household is a much stronger determinant of the electrification rate than policy or any other factor for that matter. In others words, even if a country has the best policy frameworks but very low income levels, it will follow that the electrification rates will remain low. Besides Vietnam, for example, no other country with a GDP per capita lower than US\$2,000 has so far attained universal electrification (i.e. 95%+). Low income level is often assumed and overlooked as a cornerstone barrier to electrification as most commentaries focus on external institutional, technical and business challenges – which still play a major role, but are less influential in comparison to the ability of the customer to pay for a connection, energy device or energy service. Without a doubt, better policy frameworks are always better than no-policy or weak-policy conditions but these too fail to result in rapid electrification in low income scenarios. Realizing

this will give credit to the efforts targeted at policy reform, even though they have not resulted in the expected rapid electrification simply because, by themselves, they cannot.



In conclusion, some argue that the 600 million people without access, which represents over 60% of the population, gives an incomplete picture. Going by the number of adults with mobile phones (which is over 65% in most Sub Saharan countries and higher than 80% in some)<sup>4</sup>, and that mobiles phones can only be charged using electricity, means that at least all these cellphone owners have some form of access to electricity – even if that electricity is not found at their house. This opens up the long winded discussion on definitions of “electricity access” and “electrification.” Are the unconnected households within the 70% of Kenyan households within 1000 meters of the grid also counted among the 600 million without access to electricity? And should they? They are certainly within reasonable proximity of the grid

<sup>3</sup> EED Advisory (2015) *Energy Access Review*, Energy, Environment and Development Advisory, Publication number; 15-Q3EA, Nairobi, Kenya.

<sup>4</sup> Pew Research Centre (2015), *Cellphones in Africa – A communication lifeline*, Pew Research Centre, Washington DC.

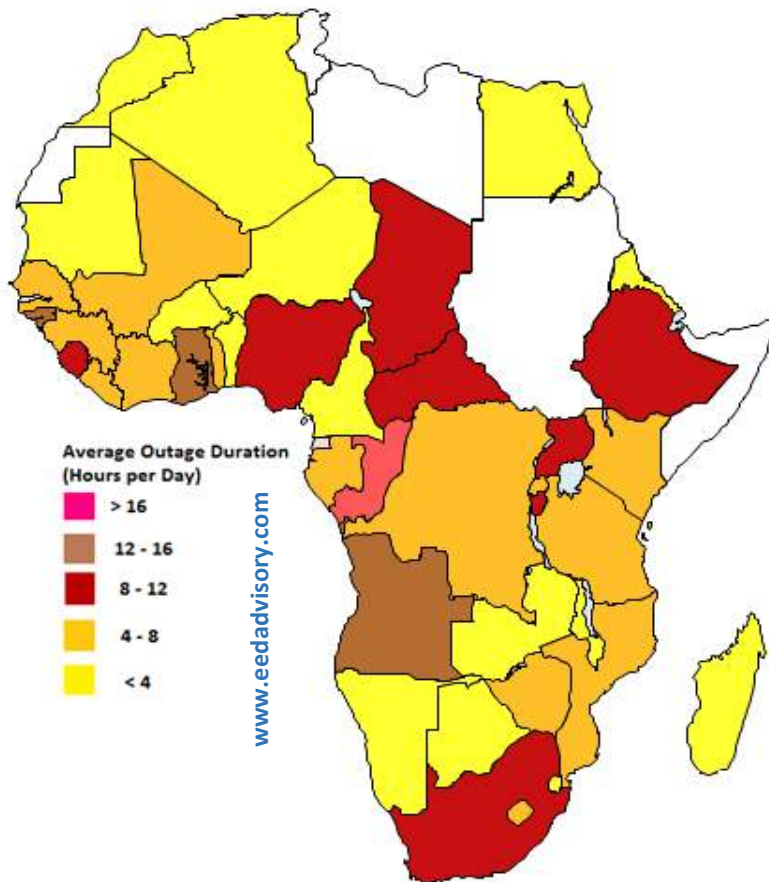
(availability) and although the electricity is not currently delivered to their households it may be to a trading center near them (degree of access). Those that are connected to the grid may not use the electricity for all desired applications, for example, cooking and heating because it is too expensive (level of utilization) and using it for lighting and other light applications is

unpredictable therefore one often needs back-up (quality). But if the entire 70% population has some degree of access, who then is off-grid? Only the 30%? The fact remains that we all still have a long way to go in defining, articulating and usefully measuring energy access metrics in Africa.

### Power's out – Economic cost of power outages in Africa

Power outages put up a heavy cost upon the continent. The increase in operational costs for running businesses reduces the competitiveness of local products consequently creating a surge in importation of products. Africa is viewed as the new frontier in investment and innovation. Four of the world's top 10 fastest growing economies in 2015/16 are forecast to be in Africa. These are Ethiopia, Democratic Republic of the Congo, Côte d'Ivoire and Mozambique, according to the credit rating firm Moody's, in the Global Sovereign Statistical Trends<sup>5</sup>.

Figure 4 Consolidating outage hours per country (Aggregated sources: IFC Enterprise Surveys)



South Africa, previously the continent's largest economy, and Nigeria, which took the lead in a 2014 rebasing, both hold economies facing the worst challenges in power quality and delivery – owing also to their large share of the continent's installed capacity. South Africa has especially been on the limelight with rolling blackouts and utility woes. Experts argue that under-investment in energy infrastructure coupled with the mismanagement of its national utility have been South Africa's bane. While the economy is growing in other parts of Africa, the country's mining industry players are being ordered to cut back on power usage to a set schedule, adversely affecting their financial statements and their economy and causing foreign investors to think twice

about entering the market<sup>6</sup>. This is coupled with the global cooling down of commodity prices.

Power outages in Kenya have for a long time been a common occurrence with much of an uproar being incited by the frequency and duration of outages. Consequently, many homesteads and businesses have had to look for backup power solutions in readiness of the interruptions. Kenya Power seeking to notify

<sup>5</sup>Global Sovereign Statistical Trends (2015), Moody's [https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0CB0QFjAAahUKEwiP7ozbvlrI\\_AhWFuxQKHbXLA7g&url=https%3A%2F%2Fwww.moody.com%2F&usg=AFQjCNGE00Un87eYchCGkRDU1bEA5zL7Ww&sig2=pg5roRjHhK\\_IllaxKuOmeqA](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0CB0QFjAAahUKEwiP7ozbvlrI_AhWFuxQKHbXLA7g&url=https%3A%2F%2Fwww.moody.com%2F&usg=AFQjCNGE00Un87eYchCGkRDU1bEA5zL7Ww&sig2=pg5roRjHhK_IllaxKuOmeqA)

<sup>6</sup> KPMG (2014), Sector Report, Power in Africa

the public now runs a portal dubbed *Power Alert* which consolidates all planned outages or shutdowns expected<sup>7</sup>. The beta version is open to the public as KPLC continues to publish weekly interruption schedules in the local dailies and on their website<sup>8</sup>.

### A peek into the numbers

In a typical month, firms in Kenya experience 6.3 power outages in a month, each lasting an average duration of 5 hours<sup>9</sup>. According to the World Bank, these interruptions cost the firms 7.1% of their sales in losses<sup>10</sup>. Power outages therefore have a significant effect on the operations of businesses. Foster and Steinbuks<sup>11</sup> state that firms that experience fewer than 30 days in a year of outages tend to declare that electricity is not an obstacle for the growth of their businesses. However, firms that face more than 60 days of outages in a year believe that electricity is a severe obstacle in the operation and growth of their businesses. Businesses that report the more than 60 days of power outages per year are more likely to have own-generation facilities ranging from battery backup systems to backup generators<sup>12</sup>.

**Table 1 Outages and Own Generation: Statistics from the Enterprise Survey**

	Power outages, days	Power outages, % sales	Electricity cited as business constraint, % of firms	Generator owners, % firms	Power from own generator (%)	Days to get connection
Kenya (2013)	6.3	7	22.2	57.4	14	43
Tanzania (2013)	8.9	15.1	45.8	43	24.5	52.6
Uganda (2013)	6.3	11.2	26.8	52.2	17.6	18.1
Rwanda (2011)	4	2.6	15.4	48.8	7.8	31.4
Burundi (2014)	16.6	3.4	46.9	64.2	17.5	25.3
Malawi (2014)	6.7	7.2	24.8	40.9	27.3	50.4
Nigeria (2014)	32.8	15.6	48.8	70.7	58.8	9.4
Ghana (2013)	8.4	15.8	61.2	52.1	21.5	44.7
Ethiopia (2011)	5.6	4.3	23.1	40.6	21.7	111.8
Zimbabwe (2011)	6.7	8.8	46.8	53	10.4	30

Sources Aggregated: Enterprise Surveys (<http://www.enterprisesurveys.org>), The World Bank; McKinsey and Company (2015), *Brighter Africa: The growth potential of the sub-Saharan electricity sector*

<sup>7</sup> Kenya Power (2015) Scheduled outages for Kenya Power <http://poweralerts.kenyapower.co.ke/>

<sup>8</sup> KPLC (2015), *Power Interruptions schedule* <http://www.kplc.co.ke/category/view/50>

<sup>9</sup> World Bank (2013), World Development Indicators, *Number of power outages in a month* <http://databank.worldbank.org/data/views/reports/tableview.aspx>

<sup>10</sup> World Bank (2013) Enterprise Surveys. *Value of sales lost due to electrical outages* <http://databank.worldbank.org/data/views/reports/tableview.aspx>

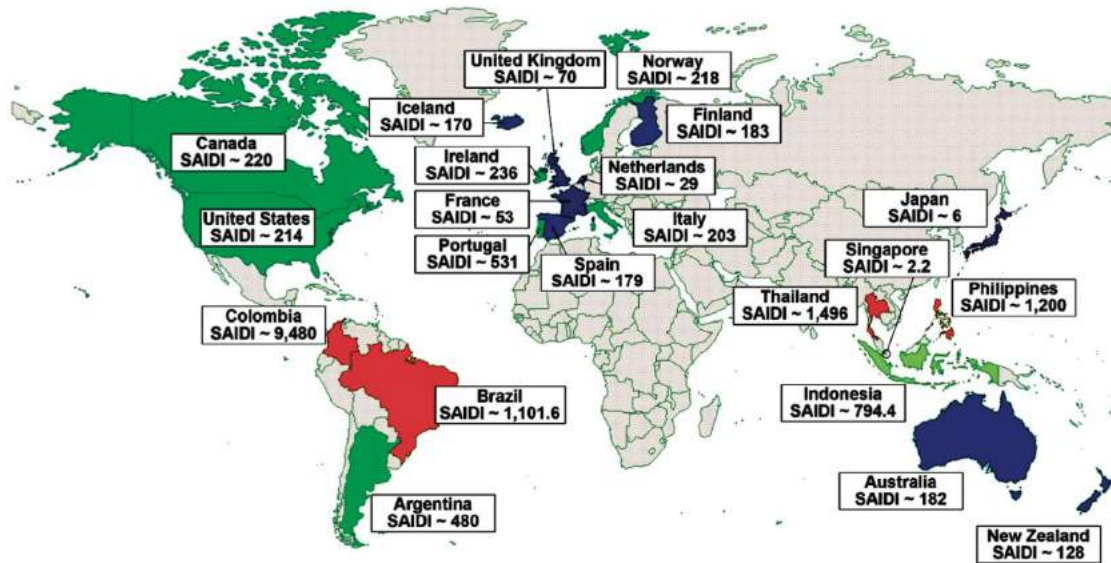
<sup>11</sup> V. Foster, J. Steinbuks (2009), Policy Research Working Paper 4913 *Paying the Price for Unreliable Power Supplies*

<sup>12</sup> IBRD (2011), *Africa's Power Infrastructure: Investment, Integration, Efficiency*

By comparison, the SAIDI (System Average Interruption Duration Index) used to measure total electric grid outage duration, number of minutes per year of outage experienced by an average customer, across a sample of countries, gives Singapore's at 2.2 minutes annual per customer<sup>13</sup>. The Asian country is followed closely by Japan at 6 minutes.

country variation in growth rates would have been reduced by around 20%<sup>14</sup>. The irony of this is seen in the current state of economic instability that South Africa is facing partly due to its inability to guarantee basic electricity delivery<sup>15</sup>. As the rest of the continent celebrates the upward trend of economic growth, the question that lingers is should Africa's only focus be on

Figure 5 Select Global SAIDI measures



Source: Terrorism and the Electric Power Delivery System (2012)

**Conclusion**

T. B. Andersen and C-J. Dalgaard (2013) statistically investigate the effect of power outages on Africa's economic growth experience. A fascinating observation from the paper states that "if all African countries had experienced South Africa's power quality (between 1995 and 2007), the continent's average annual rate of real GDP per capita growth would have been increased by 2 percentage points and the cross-

expanding current installed capacities or should a part of that focus be reinforcing existing infrastructure to curb losses?

**Singapore**  
experiences a total of 2.2 minutes of  
power outage per year.

<sup>13</sup> System Reliability Indices for Utilities, Definition of the SAIDI measure

[www.l2eng.com/Reliability\\_Indices\\_for\\_Utilities.pdf](http://www.l2eng.com/Reliability_Indices_for_Utilities.pdf)

<sup>14</sup> T. B. Andersen, C-J. Dalgaard (2013), Power outages and economic growth in Africa

<sup>15</sup> Bloomberg (2015) Eskom derided over South African power outages

<http://www.bloomberg.com/news/articles/2015-06-07/once-lauded-eskom-now-derided-over-south-african-power-outages>



## First Quarter 2016 Energy Access News Highlights



- **Off-Grid Electric wins the 2016 Zayed Future Energy Prize in the SME category** - Tanzania-based Off Grid Electric won the 2016 Zayed Future Energy Prize SME category of US\$ 1.5 million. Total Energy Ventures has also secured a stake in the company which recently closed a US\$ 25 million Series C funding. DBL Partners led the Series C round with participation from other investors that included Omidyar Network, Serious Change LP and Vulcan Capital. Off-Grid's new funding will be used in Rwanda and Tanzania to bring clean light sources to off-grid areas. The company has signed a partnership with the government of Tanzania to power one million homes in the next three years and recently entered its second country, Rwanda. In addition to the funding, Nancy Pfund, a founder and managing partner of DBL, has been appointed chairperson of the Off Grid board.
- **IFC to support Tanzania ease power shortages** - The International Finance Corporation (IFC), a member of the World Bank Group, is providing a US\$ 60 million loan to Pan-African Energy Tanzania Limited to help develop Tanzania's offshore natural gas reserves as a means to provide reliable, low-cost electricity. Pan-African Energy Tanzania Limited is a wholly owned operating subsidiary of Orca Exploration Group Inc. IFC's financing will be used to fund the development of the Songo Songo gas field. The Songo Songo field is one of the most important source of proven natural gas production, and is the largest supplier of energy to the Dar es Salaam region.
- **IFC launches US\$ 5 million mini-grid program to increase energy access in Tanzania** - IFC, in October, launched a US\$ 5 million program to increase energy access in Tanzania by developing a market for mini-grids. The initiative aims to bring affordable, off-grid renewable energy to households and businesses in rural Tanzania. IFC will work with project developers in Tanzania to promote commercially viable mini-grid business models, and will advise banks and financial institutions on how to extend long term finance to mini-grid developers.



- **Chase Bank Kenya, AFD open credit line for green energy projects** – Chase Bank Kenya and *Agence Francaise de Developpement* (AFD) have signed a credit line worth US\$ 10 million (€ 9.1 million) to finance green energy projects in Kenya. The 12-year facility has been availed to Chase Bank Kenya for onward lending to businesses investing in renewable energy technologies projects (small hydro, biomass, biogas, solar, geothermal) as well as energy efficiency measures. The credit line also comes with a technical assistance program that will be managed by Kenya Association of Manufacturers. The latter will assist the project's sponsors on feasibility studies and technical support.

- **Chase Bank Kenya, Global Fund sign deal to promote renewable energy –** The Global Climate Partnership Fund (GCPF) has signed a facility agreement with Chase Bank Kenya Limited for a US\$ 30 million green financing facility with a tenure of eight years, with a possibility to increase to US\$ 45 million. Under the agreement, GCPF provides Chase Bank with a US\$ 30 million green financing facility which the bank will mainly use to finance small scale renewable energy projects such as captive solar power plants and hydro power plants. Moreover, the bank will receive technical support in identifying green lending opportunities both within their existing client portfolio and in the broader Kenyan energy market with a possible further geographical expansion. This is the first GCPF transaction in Kenya
- **M-KOPA Solar closes US\$ 19 million financing round and launches solar-powered digital TV –** Kenyan solar energy start up M-KOPA Solar has announced the closing of a US\$ 19 million financing round led by London-based Generation Investment Management. Generation Investment Management was founded by former US Vice President Al Gore and is chaired by David Blood. The firm led the financing round, which also brought in new investments by Sir Richard Branson of Virgin Group and AOL founders Jean and Steve Case. M-KOPA, has also launched its first solar-powered digital flat screen TV. Customers who have finished paying off their M-KOPA payment plans can now extend their KSh50 (US¢ 50)-per-day payment plan to upgrade to the 'M-KOPA + TV' system.
- **Lake Turkana Wind Power (LTWP) turbines arrive in Kenya –** The first set of wind turbines for the LTWP project arrived at the project location in Marsabit county in March. The turbines kick off the wind power project after its ground-breaking ceremony officiated by President Uhuru Kenyatta on July 2015. The shipment was the first of the 365 wind turbines expected, which will inject 310 megawatts to the national grid. 85 megawatts is expected to be injected by December this year. The complete project will comprise approximately 20 per cent of Kenya's currently installed generating capacity. Firms under the consortium are KP&P BV Africa, Vestas Wind Systems, Norwegian Investment Fund for Developing Countries, Industrial Fund for Developing Countries (IFU) Denmark, and Finnish Fund for Industrial Cooperation Ltd (Finnfund).
- **ICIPE launches US\$ 2.5 million renewable energy project -** Solarcentury is set to install three power plants with a total capacity of 1,154 kWp at the Nairobi-based International Centre of Insect Physiology and Ecology (Icipe). Work on site will commence in July and the systems are expected to be generating solar electricity by October. Two solar roof systems combined with a carport system will be built at the Icipe Duduville Campus in Nairobi. The third solar roof system will be built at the Icipe Thomas Odhiambo Campus,

in Western Kenya, which will be combined with battery storage. Solarcentury will design the systems and will be the EPC contractor (engineer, procure, construct), also with responsibility for operation and maintenance for the next five years.

- **US firm injects 29 megawatts (MW) geothermal power into grid** - US energy firm Ormat Technologies commissioned another unit within the Olkaria III complex in February, pushing its overall generating capacity to 139 MW. Ormat said it had reached the commercial operation phase of plant 4 which adds 29 MW of geothermal power to be sold to Kenya Power under a 20-year power purchase agreement.



- **Climate Investment Fund awards Uganda US\$ 50 million for renewable energy** - Uganda has secured US\$ 50 million in funding from the Climate Investment Fund (CIF) under the Scaling Up Renewable in Low Income Countries Programme (SREP), aimed at advancing the country's renewable energy projects. According to the company statement, the SREP funding will help to accelerate Uganda's Investment Plan by promoting geothermal development, solar PV off-grid rural electrification and-grid net metering, and wind measurement for development of pilot wind power project.
- **Uganda builds a solar-powered bus for Africa's roads** - Ugandan engineers have built a solar-powered electric bus, a first of its kind in East Africa aiming to revolutionize the automotive market in the region. The Kayoola, as it's called, is a 35-seater that can run for up to 80 kilometres on two power banks that can also be recharged by solar panels installed on the roof of the bus. Paul Musasizi, CEO of Kiira Motors Corporation (KMC), the state-funded company behind the vehicle, said the idea is to leverage the solar energy potential in Uganda as a source of power for cars.
- **AfDB approves US\$ 138 million for Rusizi III hydro project** – The African Development Bank (AfDB) has approved US\$ 138 million in loans and grants to finance the Rusizi III hydropower plant project. A statement from the AfDB in January indicated that the implementation of the project will be carried out at a total cost of US\$ 625.19 million. At least US\$ 138.88 million will be borne by the AfDB's public sector window and US\$ 50.22 million by the private sector window. Rusizi III hydropower plant is part of the Programme for Infrastructure Development in Africa and involves Burundi, the Democratic Republic of Congo and Rwanda. The financing will enable the construction of a run-of-river dam straddling the Rusizi River between the DRC and Rwanda, as well as a 147 MW power plant and distribution station.
- **BIO and Norfund invest in hydro power station in Uganda** - BIO, the Belgian Investment Company for Developing Countries, and the Norwegian development bank, Norfund have partnered to support the development of a

small hydro power station in Uganda, Rwimi SHPP. BIO will provide a US\$ 13 million senior loan, while the mezzanine financing will be brought by Norfund. The 5.6 MW greenfield project, with two wind turbines, is expected to generate 28 GWh per year. The generated power will be bought by the Ugandan Electricity Transmission Company Limited (UETCL).



- **Africa launches 300 GW renewable energy initiative** - The heads of state of African nations have launched the African Renewable Energy Initiative (AREI) in an attempt to provide 300 GW of renewable energy. Launched at the COP21 United Nations climate talks in Paris in December 2015, AREI was launched as the continent’s major contribution to the talks. The new initiative aims to formalize the continent’s desire to increase its renewable energy capacity by as much as 300 GW – twice the continent’s total current electricity supply. AREI will aim to deliver 10 GW by 2020, and then kick into high-gear to deliver the potential of 300 GW by 2030. France has pledged more than US\$ 2.1 billion (€2 billion) towards the initiative.
- **The New Deal on Energy for Africa** – In January at the World Economic Forum in Davos, the President of the African Development Bank (AfDB), Dr. Akinwumi Adesina, unveiled details of the “New Deal for Energy in Africa “. New Deal on Energy for Africa is a partnership-driven effort with the aspirational goal of achieving universal access to energy in Africa by 2025. To drive and achieve this goal, the AfDB is working with governments, the private sector, and bilateral and multilateral energy sector initiatives to develop a Transformative Partnership on Energy for Africa – a platform for public-private partnerships for innovative financing in Africa’s energy sector. The New Deal aims to (i) add 160 GW of new capacity by 2025, (ii) increase on-grid transmission and grid connections that will create 130 million new connections by 2025, 160 per cent more than today, (iii) increase off-grid generation to add 75 million connections by 2025, 20 times what we have today and (iv) increase access to clean cooking energy for around 130 million households.
- **US President Obama signs Electrify Africa Act into law**- US President Barack Obama signed into law the Electrify Africa Act which aims at bringing electricity to 50 million people in sub-Saharan Africa by 2020. The Electrify Africa Act of 2015 will give legal backing to President’s Obama flagship Power Africa scheme, which is directed towards improved access to electricity through public-private partnerships. It has taken nearly two years to be passed in both houses of the US Congress. The US government has made financial commitments of US\$ 7 billion to support the scheme, which it says in turn has drawn a further US\$ 43 billion in investment pledged from other public and private partners.



### *In the Next Issues of Energy Access Review*



- Discover the energy-water nexus and its influence on Kenya's development blueprint
- Africa's median age is below 20-years: What does this mean for medium to long-term energy planning?
- Regular updates on energy access from Tanzania, Kenya, Uganda and the Africa region

#### **ABOUT EED ADVISORY LIMITED**

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