

# UNITED STATES POWER AFRICA INITIATIVE, THE EU AND CHINA – INVESTMENT OR INTERNATIONAL POLITICS?

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## 1.0. Introduction

Most of Africa is dark in this 21st Century whilst areas that have access have been faced with unreliable supply often resulting from failing infrastructure and fuel supply insecurity. In most countries of Africa, access is fast declining as demand for power increases against collapsing infrastructure. The World Bank estimates that Africa's largest infrastructure deficit can be found in the power sector, whether measured in terms of generation capacity, electricity consumption, or security of supply. Africa's power infrastructure delivers only a fraction of the service found elsewhere in the developing world. The 48 countries of Sub-Saharan Africa (SSA) with a population of about 800 million, generates roughly the same amount of power as Spain (with a population of 45 million). According to Platts (2011), Africa had 147 GW of power generation capacity as of January 2011. With average growth of 8% in demand, this is woefully inadequate to meet the surging demand for power for the continent's industrial development and economic growth.

In terms of access, the World Bank again provides that only about a quarter of SSA have access to electricity, compared with about half in South Asia and more than 80% in Latin America, the Middle East and Northern Africa. This has been confirmed by the Union of Producers, Transporters and Distributers of Electricity in Africa (UPDEA).

**Table 1. Access rates in Africa (excluding South Africa)**

<b>Sub-region</b>	<b>Electrification rate</b>
<b>North Africa</b>	27 to 99%
<b>West Africa</b>	4 to 40%
<b>Central Africa</b>	3-35%
<b>East Africa</b>	5-25%

Source: UPDEA, 2006

The situation in Africa also shows wider disparity in access to electricity reflecting the wide inequality in access to public services in the region. For instance, 19% of the population has access to 37% of the continent's installed capacity; and the rest is shared among 81% of the population.

## 2.0. Abundant Sources of Energy

Whilst the continent remains dark, substantial amount of its energy resources remain untapped. It is estimated that the continent has more than 7% of the world's oil reserves and its share in world oil production is increasing. In 2005 it contributed 12.2% of world oil production. It also holds about 8% of world natural gas resources and accounts for about 6.2% of natural gas produced (AU/NEPAD ACTION PLAN 2010 -2015).

The continent's search for cheap hydro sources has been challenged in many ways, as large scale hydro projects are unlikely to be achieved for most part of the continent. Ghana for instance, with a total hydro potential of 2,500MW has already used about 1,500MW (Akosombo - 1020MW, Kpong - 160MW; and Bui - 400MW). The remaining hydro potential is spread over 21 small dams that are too expensive to be developed as stand-alone projects. Similarly, Ivory Coast has an installed hydro capacity of 604MW generated by 6 hydro electric facilities, a limited potential.

Africa's power generation is therefore becoming dominated by fossil fuels. In the past, oil fired plants were built because crude oil prices were lower. It made economic sense then, but with increasing international oil prices, surging demand for power, and declining hydro sources, the rise in fossil fuel use has become dramatic. Whilst most of the world are using lesser fossil fuel, oil fired power generation accounts for 17% of capacity in Africa compared with the world average of 5% (International Renewable Energy Agency, 2012). Some of the African countries that depend on fossil fuel are Ghana (1300MW out of 2800MW), Senegal (623MW out of 689MW), and Ivory Coast (498MW out of 1,202MW).

In spite of the increase in thermal generation, many African countries are still faced with fuel insecurity as crude oil and oil products including light crude and diesel have become unbearably expensive whilst cheap natural gas sources are limited as a result of transportation difficulties and poor infrastructure. The example of the West Africa Gas Pipeline is a close one, failing to deliver contract gas to Ghana and other countries linked to the pipeline. Ghana has recently increased efforts to bring its indigenous gas on stream but this promise to be inadequate in the medium term.

Also, Nigeria's power challenges have been blamed on gas shortage due to lack of adequate infrastructure and vandalism of existing infrastructure. Yet, gas producing countries in Africa are planning to export more gas to markets outside the continent. The proposed Nigeria-Algeria gas pipeline to facilitate gas exports to Europe is one good example. There are also plans to commercialize and export gas from gas fields discovered in Mozambique and Tanzania through LNG projects instead of prioritizing domestic and regional use of gas for generating affordable electricity. Why Africa wants to meet the energy security of Europe at its expense cannot be easily understood beyond financial reasons.

Several economic problems are associated with power shortage. Electric power is often referred to as the fuel of the economy and the engine of economic growth. Industrial activities, commercial services and social services all require electricity to flourish. Poverty and inequality in most countries can be traced to differential access to electricity particularly between the urban rich and poor, between urban and rural areas and between developed and underdeveloped communities.

Cost of living associated with rising cost of energy has been increasing and these have consequences for inflation thus transmitting the effects of energy cost to the overall economy. African Governments have used a combination of measures to reduce the effects of high energy cost on their people including for example subsidies on energy prices. However, subsidies have often led to high fiscal deficits as a result of the inability of the governments to finance them. They have also affected the development of power infrastructure as prices are not incentivizing private sector participation. Moreover, the Governments are unable to inject resources into upgrading infrastructure and building new ones whilst subsidizing production at the same time. African Governments are therefore constrained by these developments from making more critical development interventions.

To meet their electricity needs, some electricity consumers have often resorted to more expensive non-grid sources for power such as diesel generating sets. In October 2008, in Tanzania when the residents in Zanzibar experienced blackout following failed cable lines supplying Zanzibar as a result of surge in power demand, residents spent \$10 daily to furl diesel generators for power whilst small businesses requiring refrigeration or welding had to close because they could not afford the extra cost.

Frequent power outages (including forced outages) have damaged the appliances of poor people without compensation; and industries as well, leading to low productivity, job losses, and lower growth. In South Africa, a five day power shortage in 2008 shut down hospital equipment, forced drivers to drive without traffic light, shut down the gold and platinum mines leading to a down grade in the country's credit rating.

### **3.0. US Power Africa Initiative and Africa's Power Deficit**

President Obama unveiled a US\$7 billion initiative to help Africa tackle its crippling power deficit with the aim of doubling access to electricity. This partnership with Africa is expected to accelerate economic growth and increase development for poverty reduction. As President Obama put it, "access to electricity is fundamental opportunity in this age; it is the light that children study by, the energy that allows an idea to be transformed into real business. It is the lifeline for families to meet their most basic needs and it's the connection that is needed to plug Africa into the grid of the global economy".

There is no doubt that the power deficit in Africa is hampering development and undermining investment derives on the continent. The Power Africa Initiative therefore promises to provide relief to African people who have been in darkness for most of their lives especially those in off-grid areas. The Initiative will first focus on some six (6) African countries - Ethiopia, Ghana, Kenya, Liberia, Nigeria, and Tanzania.

The initiative is expected to add more than 10,000MW of new generation capacity to expand access to about 20 million people and commercial entities through expansion of mini-grid and off-grid solutions; and building generation, transmission and distribution structures. It is also expected to enhance energy resource management capabilities.

Certainly, the Power Africa Initiative has identified the causes of Africa's power problems – technology, investment, regulatory reforms. But these are not new to African Governments and their institutions.

There is a compelling argument for the US to include regulatory reforms under the Initiative because poor management of utilities arising from politically motivated appointments of managers and board members, political interference in regulatory institutions and low level of accountability; are largely responsible for the poor state of Africa's power sector. Thus, addressing the problem from technology and investment perspectives alone could (to say the least) beg the real issues of governance affecting the sector.

It is also important to note that the general level of governance on the continent where the culture of impunity reigns, and where lip service is paid to institutional development giving rise to corruption, has significantly contributed to the sorry state of public companies including utility companies. Private sector investments have suffered as a result of the huge political risks associated with investing on the continent. For countries such as Ghana which is receiving a second compact of the US Millennium Challenge Account for energy sector investments, good governance - transparency, accountability, human rights and investing rightly – have been the overriding yardstick for its qualification for the grant. Therefore, the link between the US initiative and power sector governance reforms could countries such as Ethiopia and Nigeria to increasing democratization of public services.

#### **4.0. Investment or International Politics**

The US no doubt has a big interest in Africa just like the EU and China. These countries have their companies operating oil and gas fields that contribute to energy production. There is also no doubt that development aid and international investment policy often seek to promote the identity of one developed country or the other, pursuing different international agenda.

However, the interest in Africa's power sector is likely to turn the continent into an arena for international competition among investors from the United States, EU and China. This is attributed to the higher returns on power sector investments in Africa. The US Africa Power Initiative, although laudable and transformative in terms of its ability to change the development aid landscape in favour of trade and investment, it could as well be classified as US response to the dominance of Africa's power industry by EU and China.

The US interest in Africa's power sector can be attributed to several reasons apart from a genuine desire to help Africa. One of these reasons being that with power Africa, important regulatory reforms will be realized and create safe markets for US investors. Another reason is that US oil and gas producing companies need new markets for the oil and gas they produce following a reversal in US policy on domestic oil production. With increasing domestic oil production by the US and the Shale gas boom, US import of crude oil will certainly decline. US companies producing crude oil outside the US therefore must find markets for their resources. The need for the US to encourage Africa's use of its hydrocarbons particularly for power production is therefore appropriate and forward looking.

However, this only shows how proactive the US is. Particularly, the approach to encourage Africa's consumption of its hydrocarbons makes more economic sense to Africans themselves as that could add value to the economy through power production and other industrial uses such as petrochemicals, and promote regional integration. Stranded gas elsewhere in Africa will have market on the continent. This no doubt requires substantial investment in integrated regional gas infrastructure for regional gas trading.

In the area of power projects and investments, the US has a technology to sell to the world as well. Power Africa is expected to leverage US energy technology and US private

investments. This provides important markets for US technology as well as new investment horizons in the power sector outside the traditional investment projects in oil, gas and minerals. But as it is often said, there is no free lunch.

As already observed, that Power Africa Initiative is an attempt to build in Africa a new image of investment partnership for the US, should therefore be seen as a strategic move to establish US influence. This cannot be over-emphasized. Both the EU and China have invested heavily in Africa's power industry unlike the US. The EU for instance has provided significant financial support to Africa in power projects ranging from generation projects to transmission and distribution projects.

The EU's current focus has been in the promotion of renewable energy investments in response to the United Nation's Sustainable Energy for All (SE4All) programme, which has noble objectives of providing universal access to modern energy services; doubling the global rate of improvement in energy efficiency; and the share of renewable energy in the global energy mix. It is even pushing for this to be adopted as one of the post-MDG targets and has become one of the major areas that will receive EU support and funding in Africa in future.

Also, the European Investment Bank is one of the world's largest lenders in renewable energy and over the last five years has provided more than EUR 26 billion for renewable energy projects around the world, a financing which is much more than the US\$7 billion promised for the Power Africa Initiative. However, with significant technology in renewable energy, it is safe to argue that the EU has also been pushing to open new markets for its technology. Even though, it sounds logical that harnessing renewable energy sources is the way to go in Africa and which could contribute to diversifying energy sources particularly to reach off-grid targets, the massive promotion of such technologies proven to be very expensive in Africa as a result of the huge subsidies associated with these energy sources cannot pass without notice.

The analyses at this stage shows that the attention being given to the Power Africa Initiative by the US; and the Sustainable Energy for All Programme by the EU amply demonstrates the contests between investment and international politics of power; as the two giants will not stop at anything to increase their interest in Africa in the name of infrastructure investments. The financing models promoted by the US and Europe do not tie in natural resource trading, and are therefore likely to become more attractive as a n alternative to China's model of "Infrastructure loans for natural resource". Particularly, the Chinese model has proven very expensive for some resource rich countries as a result of delays in loan disbursements whilst natural resource supply to China increases. The benefits of the Chinese model have been described as "disproportional".

Can the US and EU overtake China in infrastructure Financing for Energy Projects?

China has been providing funds to finance gas infrastructure and power projects in Africa. In fact, the sector attracting the largest amount of Chinese financing has been the power sector with more than US\$5.3 billion in cumulative commitments at present. Much of this effort has been concentrated in hydroelectric schemes. By the end of 2007, the Chinese were involved in financing 10 major hydro electric dams in 9 different African countries for power generation with a total cost estimated at more than US\$5 billion, with Chinese financing constituting two-thirds of the total cost. These projects are expected to generate a total of about 6000 MW of electricity.

In October 2008, Sino-Hydro, a Chinese company, reached a loan agreement with the Ghanaian government for US\$562 million to finance the Bui hydroelectric power project expected to generate 400MW of power in Ghana's Brong Ahafo region. The project has been completed and is now on stream. In addition, the China Development Bank also approved a US\$3 billion facility, part of which has been applied to the development of gas infrastructure for commercializing gas from the Jubilee Fields. The Engineering, Procurement and Construction (EPC) contract is being executed by SINOPEC.

Apart from hydro-power projects, the Chinese have been involved in thermal power in many African countries including three projects in Sudan (1,120MW), Nigeria (813MW) and Ghana (200MW), among others.

But again, Chinese interest in Africa is no secret. Most of the financing are resource backed facilities. For example, the Republic of Congo's Hydro-power project in River Congo was backed by crude oil. Ghana's Bui dam power and gas infrastructure projects were collateralized against cocoa and crude oil respectively.

It is now clear that there is clear contest between investments and international politics under the US Power Africa Initiative. But which takes precedence over the other will depend on the actions of Africa's leaders and those of US competitors – The EU and China.

## 5.0. The Way Forward for Africa's Power Sector

Obviously, there is no smoke without fire. Similarly, no country promotes the development of another without an interest. The US Power Africa Initiative therefore has an intrinsic interest which is not well articulated. It remains to be seen however; how the US will unveil the projects as it is already being challenged in many ways:

**First**, it does not give a regional approach to solving Africa's power challenges. Rather it seeks to concentrate in a few countries as it is now. Any discussions about Africa's energy sector must be channeled through the African Union to ensure that the initiative is consistent with existing regional development programmes such as the African Mining Vision and the New Partnership for Africa's Development.

**Second**, the selection of countries in West Africa (Nigeria, Ghana and Liberia) and East Africa (Ethiopia, Kenya and Tanzania) has recognized the linkages in the development fortunes of those countries. The initiative will no doubt help in building two sub-regional growth corridors, but how it links the energy resources of one country to energy markets in the other is not clear. For instance, leveraging Nigeria gas to support energy markets in Ghana and Liberia or Tanzania gas to support markets in Kenya and Ethiopia?

**Third**, the model for funding the initiative is based on transactions with private investors leveraging US strength in energy technology and private sector participation. Whilst this proposal opens Africa's power sector to US investments, there should be a strong local content policy in mind and the need to build partnerships with Africa's private sector rather than the old model of foreign companies investing and managing infrastructure projects.

A number of measures must therefore be put in place by the leadership of Africa to complement the efforts of its development partners under the various financing and

development initiatives. Africa must weigh the direction of the contest between investment and international politics and make the right choices of maximizing benefits from the US Power Africa Initiative; the EU funded Sustainable Energy for All Programme and China's Infrastructure loan for Resources. The most important leverage Africa has at this moment to secure its interest in this contest between the "big players" over the Continent energy sector is its new status as one of the fastest growing region in the World. Africa has therefore become an important market which must be used to increase its voice and negotiation power over the international political interest of the West and China.

The following recommendations provide some of the important prescriptions that should engage the attention of Africa's leadership if the Continent is to reduce the power deficit by promoting investments in power infrastructure to transform the Continent's economies.

- i.** Leadership and the political will to take energy issues out of politics whether with pricing, regulations and contracting for energy services. Political decisions have favoured popular views which are often at variance with economic sense. The hard decisions of withdrawing subsidies and incentivizing pricing to attract private investments cannot wait any longer as the very poor who are protected by subsidies are feeling even more the pinch of power cuts and low access rates.
- ii.** Infrastructure financing must recognize a financing mix of local and foreign options. African countries must set up an 'Africa Fund for Energy Investment', a Sovereign Fund which can mobilize resources to be tapped by African Governments for strategic investments in the energy sector. The Fund can support investment in power transmission and distribution networks which are not attractive to foreign private capital because they are mostly state natural monopolies. This will reduce competition for foreign private investment between generation expansion and system improvement.
- iii.** The objective of the sub-regional power pools is laudable, but this depends on a few countries that generate more than local requirement. Pooling power at the regional level is economically rational, permitting savings. It is therefore important for African Governments to strategically push investment efforts to countries that have the potential to become power hubs in the various sub-regions. With Nigeria's abundant gas resources, the country can be a power hub for the West African Power Pool (WAPP). Similarly, Tanzania or Mozambique can become power hubs for the Eastern African Power Pool (EAPP). Also, the Republic of Congo can become a power hub in the Central Africa Power Pool through the Inga hydro project which could generate 40,000 MW. Investment efforts can also be pushed to countries where IPPs can attract financing. For example, Ivorian IPPs, CIPREL and AZITO with a combined generation capacity of 498MW have been more attractive to international financial institutions and commercial Banks than most IPPs in other countries.
- iv.** Infrastructure standards must favour plant effectiveness and operational efficiency to prevent dumping of low quality equipments in Africa. In the case of thermal generation for example, African countries must move from single cycle plants to combined cycle to ensure efficient use of fuel. Conversion from single to combined cycle is very expensive; hence it is important to invest in combined cycle plants from the onset.
- v.** African Governments should integrate local content policies in the power sector. Foreign and local partnership is important to build local capacity to sustain investments in the power sector. Power plant manufacturers should be encouraged

to assemble power plants in Africa or in future build the plants here using local materials.

- vi. The regulatory reforms must include utility service accountability. Whilst investments are being improved, consumers must hold utilities accountable. Trigger factors that account for electricity pricing must be transparent whilst utilities must sign consumer charters based on which consumers can bring utilities to account.