

Renewable Power Generation: Ayitepa wind farm ready to power West Africa

GHANA will once again play a pioneering role in leading West Africa to switch from conventional, outdated energy generation to the production of electricity from renewable.

This feat would be achieved when the Ayitepa Wind Farm fully develop to generate 225mw of renewable power to deliver quick, clean and affordable power for the Ghana grid.

The Project is to be undertaken by NEK UMWELTTECHNIK AG, a Swiss engineering company with specialty in wind energy project development with operations in Spain, Romania, Brazil and Kosovo.

They are currently in Ghana, to undertake the first Wind IPP and one of the first grid-scale wind project at Ningo-Prampram District, in the Greater Accra Region.

The project is a major step towards Ghana's target of 10 per cent renewable energy capacity by 2020 (now changed to 2030) and the transition from conventional to renewable energy supply as announced by government.

NEK began the concept of wind power in Ghana about 19 years ago and feasibility was almost completed during the era of the previous NPP government.

When the company detected the potential for win energy in Ghana in 1998, it partnered with Atlantic in 2003 and established NEK (Ghana) Ltd in order to develop preliminary wind parks.

It was after the Renewable Energy Act 2011 was enacted that NEK started the development of 5 large-scale wind projects in Ghana.

The concept was to developed 225mw Capacity and approximation of 7,00GWH of annual production of clean, homemade

electricity at a total investment cost of approximately US\$525 million.

The financing of the project was to be provided by International Finance Corporation (IFC) and (OPIC) Overseas Private Investment Corporation as mandated by the lead arranger the World Bank.

Lekela Power BV, a Pan-African renewable IPP expert would invest, own and operate the project.

At the time of writing this piece, Plans were far advanced to kick start the project with a financial closure in the 4th Quarter of 2017 to begin power generation in 9

months after the start of construction. After completion, the project would move into full capacity generation between 15 to 18 months.

It would then serve as quick emergency power since Wind power is intermittent and would be able to replace other power sources only during windy periods.

Therefore, the wind power would constitute a great addition to the energy mix of thermal and hydro generation. One of the Key advantage of the wind power generation was the competitive tariff system it brings along.

The project generates power at an attractive overall cost since it does not require any fuel and the price is fixed for over 20 years (no indexation) while it reduces Ghana's exposure to fuel price fluctuations.

What is urgently required from government for the project to reach a financial closure and take are Parliamentary approval for a put and call option Agreement ("PCOA") and a World Bank Partial Risk Guarantee (PRG) to back the Power Purchase Agreement.

There is also the need for a tax exemption issued to be resolved by the Ministry of Finance and the Ghana Revenue Authority

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Various Community Support programmes including irrigation on site to enhance yield from farming It is also going to increase local employment through attracting more farmers and adoption of modern farming technologies in the area.

It is envisaged that over 600 employment opportunities during peak construction and 40 permanent staffed jobs for the 25 year lifespan of the project. The project

would also use local contractors wherever possible.

Secondly, through it community Investment strategy the project will fund initiatives meeting the needs of the local communities in skill training, education, health and farming on site, estimated to cost between 500,000 to 1million dollars annually.

That aside about 600,000 dollars would be paid to land owners annually whilst Land Commission receives 15,000 dollars per annum. Tax receipts for the country is also estimated at between 5 to 8 million dollars with annual payments to Energy Commission pegged at 155,000 dollars.

The project once implemented would bring some political benefits to the country One area of benefit is the security of supply since wind generated electricity is not dependent on factors in any other country or around the world.

The generation also does not depend on the possibility to purchase gas or crude from third parties to generate power.

Once the transition from conventional to renewable energy productions with Ayitepa as the leading and pioneering project is underway, Ghana can become an exporter of clean, affordable and sustainable electricity to other countries.

Also through the implementation of irrigation systems and new farming technologies within the wind farm area, the local production of produce would be improved, and increase to boost agriculture and employment of farmers to contribute to the goal of the government to support land food production.

Dr Christopher Kopp, Chief Executive Officer of Upwind Ayitepa (Ghana) Ltd has said "we are optimistic that the project

takes off soon and we are encourage by the recent visit of Doris Leuthard, President of Switzerland to Ghana who also visited the project site

He said NEK was given the opportunity to make a short presentation on the NEK'S Wind Power Projects in Ghana to the Switzerland President and President Akuffo-Addo after which both leaders expressed satisfaction about the project.

Dr Kopp said the project would bring immense benefit to the nation, as it is one of the first projects in Africa, supported by the World Bank in line with its global programme for sustainable power.



• A wind farm