

The 225MW wind farm Ayitepa to be a game changer for Ghana

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Ghana would once again play a pioneering role to be the leading West African country to switch from the predominance of thermal and conventional energy generation sources to the introduction of the production of electricity from renewable energy sources like wind energy. This feat would be achieved when the 225MW Wind Farm Ayitepa to be located within the Great Ningo Traditional Area in the Greater Accra Region is completed.

The wind farm is being developed for several years now by NEK Umwelttechnik AG, a Swiss engineering company, through its local branch NEK (Ghana) Ltd. NEK intends to be the first Wind IPP in Ghana and to implement one of the first grid-scale and the largest wind project in West Africa.

Lekela Power BV, a Pan-African renewable IPP company, will invest, own and operate the project once the project is acquired from NEK. Owners of Lekela are Actis, a London based private equity fund, which was known to have invested equity and raised debt to finance the Accra Mall, and Mainstream Renewable Power, an Irish Wind and Solar development company focusing on Africa. Both owners are well known key players on the African terrain.

The completion of this project will be the major step towards Ghana's target of 10% renewable energy capacity by 2020 (now changed to 2030) and the transition from conventional to renewable energy supply as announced by the government repeatedly.



NEK Business Development in Ghana

Switzerland based NEK Umwelttechnik AG began reviewing wind conditions in Ghana as early as in 1998 and by the year 2005 was confident that there were adequate wind speeds for power generation along specific locations along the coast of Ghana. Based on these favourable results, it partnered with Atlantic International Holding Company Ghana Limited in 2003 and established NEK (Ghana) Ltd. in order to develop preliminary wind parks. By 2006, a number of wind parks were already almost ready to be built, but it was only after the Renewable Energy Act was enacted in 2011, that the relevant regulatory framework, laws, obligations and tariffs have been put in place to creating the enabling platform.

Country Manager for NEK Ghana, Mr. Michael Wuddah-Martey, mentioned that the concept is to develop, finance, build and operate a first 225MW grid connected wind project that will provide approximately 700,000 MWh of annual production of clean, homemade and sustainable electricity at a total investment cost of approximately US\$525 million. The financing of the 225MW Wind Farm Ayitepa is to be provided by IFC and OPIC as mandated by the lead arranger, the World Bank.

As at writing this piece, plans are far advanced to start the project which is fully permitted and developed with a financial closure in the 4th Quarter of 2017. This would ensure that within 9 months, the first approx. 40MW of supply capacity could be connected to the grid, and given another 13 months, the full capacity of 225MW would have been completed.

After completion, the Wind Farm would then serve as quick emergency power and complement power supply from other sources. Its production will help reduce problems encountered with gas supply and availability, susceptibility to fluctuations in oil prices and foreign exchange utilization.

Government to facilitate wind power project

Thus, the wind power would constitute a great addition to the energy mix to Ghana's thermal and hydro generation. One of the key advantages of wind power generation is the competitive tariff system it brings along. The project generates power at an attractive overall cost and once completed, does not require any fuel or gas to run. The natural and never ending "fuel" to produce clean electricity is the constant wind blowing at the project site. The Feed-In-Tariff as recommended by the Public Utilities Regulatory Commission is at a fixed price without indexation valid for a period of 20 years.

The project now requires the final support from Government to reach financial closure and take-off. This involves getting Parliamentary Approval for a Put and Call Option Agreement ("PCOA") and a World Bank Partial Risk Guarantee (PRG) to back the Power Purchase Agreement signed with the Electricity Company of Ghana. Issues relating to tax exemptions are also critical.



Benefits to the Country

Socio-Economic Benefits

The project already has the full support of the landowners and adjoining communities and is grateful to the Lands Commission, Djangmaaku, Saunya and Aniamorsi clans amongst others, for allowing their lands to be used for the project. Already a number of school buildings have been rehabilitated and/or upgraded under the project with funds released prior to project kick-off. Communities within the Ningo-Prampram District need development and this is what the project brings.

The wind turbines will have large stretches of land between them and as is the practice now, farmers will be allowed and encouraged to continue farming within the Wind Park, while irrigation and modern farming technologies would be provided by Lekela in order to support the District Assembly's vision of making the Great Ningo area a food basket for the Greater Accra Region.

More than 600 employment opportunities will be created during construction and at least 40 permanent staff jobs will remain for the 25 years lifespan of the project. The project would also use local contractors wherever possible and give also the youth labour perspectives in the Ningo area.

In addition, through its Community Investment strategy, of between USD500,000 to USD1million annually, the project will fund initiatives meeting the needs of the local communities in skill training, education, health and women support actions.



Political Benefits

With the relevant Government support, this project will bring enormous political benefits to the country. It would be the largest wind park in West Africa, solidify Ghana's Energy position in the Region, whilst and the same helping Government achieve its vision of being a net energy exporter. It will be Ghana's first Wind Farm showing the world that Ghana is a place where large scale renewable energy can flourish.

Once the transition from conventional to renewable electricity production with the 225MW Ayitepa Wind Farm as the leading and pioneering project is underway, Ghana can become a new exporter of clean, affordable and sustainable electricity to other countries. The project will set the template for more renewable energy projects to follow which NEK has in its development pipeline and creating a new industry that increases economic activity and is

sustainable. It will also help Ghana to avoid emitting 225,000 tons of CO₂ per year into the atmosphere which would normally come from oil or gas power stations.

Also through the implementation of irrigation systems and new farming technologies within the wind farm area, the local production of goods would be improved, employing more local farmers to contribute to the goal of the Government to support inland food production.

NEK has a number of other wind farm projects still underway, which are also far advanced in the development stage, and is ready to support the government in achieving its plan to improve the energy generation mix by increasing the percentage of renewable energy within the medium to long term.

President Akuffo-Addo lauds wind power project

Recently, Dr. Christopher Kapp, Chief Executive Officer of NEK, expressed huge optimism for the project pipeline after meeting with H.E. Doris Leuthard, President of Switzerland, when she was in Ghana, together with H.E. President Akuffo-Addo, the President of Ghana.

Dr. Christopher Kapp said NEK was given the opportunity to make a presentation of its wind power projects in Ghana to the Presidents, after which both leaders expressed satisfaction and their support for a quick implementation.

Dr. Kapp also mentioned that the project would bring immense benefits to the nation being one of the first big projects in Africa supported by the World Bank in line with its global programme for sustainable power.

All relevant information on the 225MW Ayitepa Wind Farm can be found on www.upwindayitepa.com.

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