

AYITEPA WIND FARM PROJECT NEWSLETTER

Issue 1—June, 2015

Introduction



Welcome to the first issue of the Ayitepa wind farm newsletter. Besides bringing you information and project updates to the community, every issue of our newsletter will detail the progress the project is making in becoming Ghana's first wind farm.

Having already engaged with the community local to the project area, we hope that we can continue this positive engagement to realise the benefits this wind farm can bring to the area.

Best regards,

Francis Tsatsu Owulah - Community Liaison Officer (CLO)

THE PROJECT

The Ayitepa Wind farm will consist of between 75 -125 wind turbines of up to a height of 205m. It will have a generation capacity of 225MW which represents approximately 10% of Ghana's electricity consumption needs.

It is located on the lands in proximity to the villages and small towns of Tsopoli, Dawa, Omarkope, Ahwiam and Ayitepa. To enable the wind farm to connect to the national electricity grid, an overhead electricity line from the wind farm will be built to the new 330kV overhead line located 3km north east of Dawa. The wind farms construction is due to commence in early 2016 with first generation expected later in that year.

THE PROJECT DEVELOPERS

NEK Umwelttechnik and NEK (Ghana) Ltd.



NEK Umwelttechnik AG is a Swiss engineering company active worldwide in several fields related to renewable energy set up in 1989. Already back in 1999, NEK began to detect the wind potential in Africa and formed a partnership with Atlantic International Holding Company in Ghana. In 2003, NEK (Ghana) Ltd. was established as a joint venture between these two companies. Since then, NEK has selected suitable measurement sites, installing measuring equipment and doing wind assessments, i.e. for the Energy Commission under the Ghana Energy Development and Access Project (GEDAP).

Based on this information NEK is developing wind farm projects by completing pre-construction development and attracting investors. One of these projects is the Ayitepa Wind Farm in which Mainstream Renewable Power has invested. NEK's aim is to provide energy efficient products and services that are environmentally friendly and therefore reduce Ghana's carbon footprint. In a competitive and rapidly expanding renewable energy market, NEK is constantly adapting to meet the customers' ever-changing needs.

www.nek-ghana.com



Dr. Christoph Kapp,
FOUNDER & CEO, NEK
GROUP, AG

THE PROJECT DEVELOPERS

Mainstream Renewable Power



Mainstream Renewable Power is one of the world's leading independent developers of renewable energy projects. With a development pipeline of over 17,000 megawatts globally it is currently operating and constructing solar and wind farms across Ireland, South Africa, Chile and Canada.

Its core business is to develop, finance, construct and operate large-scale renewable energy plant for global consumer brands, utilities and investment companies. Mainstream's business model offers an à-la-carte solution for our customers to partner with us at any stage of a project – from site identification through to long-term operation. Its focus is on building high quality renewable energy projects which benefits its partners by providing a hedge against fossil fuel and carbon prices as well as enhancing their green credentials.

www.mainstreammp.com



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Community meets in support of Ayitepa Wind Farm in Ghana

District CEO, Hon. Al-Hajj Sa Rhack Nartey calls for stakeholder co-operation to bring project into operation

On February 6th 2015 at the Pentecost Church in the village of Ayitepa, more than 300 members of the local community, including clan leaders, gathered at Ayitepa village to meet with wind farm developers Mainstream Renewable Power and NEK Umwelttechnik to discuss the 225 megawatt wind farm which is expected to start construction this year.

The full-day event included presentations on the project as well as an open forum for questions and answers. During the course of the day clan leaders and the wind farm developers agreed to cooperate in support of the project to bring the maximum benefits to the area.



Hon. Al-Hajj Sa Rhack Nartey, District CEO for Ningo Prampram (pictured) said: "The people in the various communities are very happy about this project because it will create employment and do some good for the area. The communities have attended this meeting with enthusiasm, commitment and interest." He continued: "So I appeal to all stakeholders to co-operate so this project will become very successful and bring benefits to the people in the community."



Speaking at the community event Mainstream's Development Manager for Africa, Liam Leahy (pictured) said: "Getting to know the community, understanding their needs and answering their questions with honesty and transparency is vital part of what we do as a reputable international developer of wind and solar projects." He added: "Our company values of respect and teamwork are very much in evidence today as we work hand in hand with the community and clan leaders to bring real benefits to the area in terms of local jobs during the construction of the wind farm as well as longer-term socio-economic initiatives like the ones implemented at our Jeffreys Bay wind farm in South Africa."



A large part of the day was dedicated to an open questions and answers session which included questions on where the wind turbines will be located. The developers explained that the wind farm has been designed in line with international best practice such as Equator Principles and IFC Performance Standards. The project completed a detailed aerial drone survey of the region where all residential houses were identified and a 500m buffer has been applied between wind turbines and dwellings.

The wind farm developers will further engage with clan leaders and the local community members to identify local socio-economic initiatives which the wind farm can fund during its operational phase. Programs discussed on the day related to a health facility, training & education Programme as well as improving local electricity supply.

Further community engagement meetings will be held in the coming months prior to the start of construction as part of the Community Engagement Plan for the project.

Ornithological Monitoring (Birds Study)



As part of developing the project responsibly, the Ghana Wildlife Society has begun a monitoring program to study bird activity in proximity to the wind farm site. The purpose of the study is to ensure no negative impact on bird species due to the construction of the wind

farm. The monitoring began in March this year and is due for completion in November 2015. Personnel from the Ghana Wildlife Society will be onsite during this time to monitor the bird activity.

Measuring Wind Speed and Direction on the Project Site

To accurately measure the wind speed and wind direction on site, a LiDAR module has been installed. The LiDAR sends lasers into the air in which the wind interacts with allowing the speed and direction of the wind to be recorded. The LiDAR is part of the overall wind measurement campaign which also includes the two 100m meteorological masts installed on site in January 2015. These are necessary equipment to ensure that the wind resource on site will deliver the necessary energy to drive the wind turbine to generate the electricity.



The Community Liaison Officer

Francis Tsatsu Owulah is the Community Liaison Officer (CLO) for the Ayitepa wind farm. The CLO acts as the point of contact for the local community, communicating and distributing key project information during the development and construction period.

He shall lead the Ayitepa Community Engagement Programme through consultation with local communities and stakeholders. Any issues members of the communities have in relation to the project as well as feedback should be channeled through the CLO so this can be dealt with respectfully.

Geotechnical Investigations

As part of designing the wind farm, geotechnical investigation will be carried out over June. This will involve some excavation work on site by digging equipment.

At various locations across the site trial pits will be excavated to better understand the geology and hydrology of the site. The work is not expected to take long and should not impact the local community. Please contact the CLO for further information.