Energy Ghana Magazine

# Why The Government's Plans

## For Coal Must Be Replaced By A Renewable Energy Alternative

In the abundance of free sunlight over 600 million people live in darkness in Africa. Technological advancements in producing energy through renewable sources, especially solar and wind, presents the best opportunity for the private sector in Africa to produce and sell energy directly to the residential and commercial clients using the distributed model. The distributed model is when the equipment using the renewable resource for power generation is installed at the place of use. In a home, for instance, solar can be installed to power all the energy needs.

A program which will support the private sector to take off rapidly with solar energy installation will not only create thousands of jobs, it will be a direct solution to the chronic power crisis in Ghana and by extension Africa. Unfortunately, the Ghana Government is opting for the installation of a coal based thermal plant for power generation.

Here are eight reasons why the government's plans for coal must be replaced by a renewable energy alternative.

**Capacity**

In terms of capacity the coal plant is estimated to generate 700MW for 1.5 Billion USD invested. Experts using a conservative approach concluded that a renewable energy alternative will generate 1000MW. That is 300MW more than the coal alternative.

It is extremely important to clarify here that after the expenditure of 1.5 Billion USD to build coal, there is the recurring expenditure on the purchase of coal. But with the renewable energy alternative there are no additional resource expenditures because the sun and the wind are free.

It is understandable that this decision to produce energy through coal was made about 2 or 3 years ago. Within that same period the cost of generating energy through renewables, especially solar, has dropped by over 50%. It is therefore not too late to change course.

**Possible impact on the environment**

The environmental report on the coal project states and I quote, "The possible impacts on terrestrial ecology are identified to affect air quality, ambient noise, solid waste, generation of hazardous material, vibration, waste disposal and health and safety issues, as well as social and economic impact. The potential impacts on the marine ecology include seawater temperature changes, seawater pollution, and noise pollution."

This is because of the process of drawing seawater, desalinating it and boiling to produce steam for the turbines. The renewable energy alternative presents no such hazards.

**Project Duration**

The construction of the coal thermal plant is estimated to take four years. As they say in economics, that is all things being equal.

It does not take this long to implement a renewable energy alternative using a distributed model. Using the distributed model, 100MW will be completed in the first year, 200MW in the second year, 300MW in the third year and 400MW in the fourth year. Note carefully that the initial 100MW will be generating revenue after the first year. The 200MW will also be generating energy in the second year and so on.

The fact that the renewable energy approach takes a shorter time to install and generate much-needed electricity is a great reason to adopt this alternative.

**Resource for powering plant**

The coal plant will incur additional expenditure of expensive maintenance and continuous purchase of coal. The renewable energy alternative requires little maintenance and free resource being the sun and the wind mainly.

**Jobs created and skills obtained**

The number jobs to be created for Ghanaians working to build the coal plant and maintain it is estimated at 500. Compare it to ten times that number for the renewable energy alternative. Over five thousand jobs will be created under the renewable energy alternative using the distributed model. The distributed model is when companies are licensed to install and collect revenue from individual residential and commercial installations.

This particular point is extremely crucial knowing that what we need most in this country are a vibrant group of entrepreneurs with a different paradigm, a new and fresh perspective of doing business. These renewable energy entrepreneurs will be created through the distributed model. These are the people who will transform our economy.

**Technological growth**

Unless there are special plans for research and development in the generation of energy through coal attached to the project, there will not be much technological growth after the coal plant construction. But the renewable energy alternative presents unlimited potential because we have not even scratched the surface of the technologies involved.

In Finland, the act of cutting trees with axes led to the country that is known for manufacturing cells phones. Fuel won the technological race between using fuel or batteries to power cars. Due to research in renewable energy, batteries are roaring back. That is how advancements in technology take place.

I see a future and it is here already, where renewable energy is used for irrigation, batteries power our cars and renewables are used for food processing. The renewable alternative can reach remote areas which the grid has not even reached. The grid is therefore not required in the renewable energy alternative. This is the greatest opportunity for Africa. Africa can leapfrog the process of spending millions of dollars in building inefficient grids with transformers and pylons and its continuous maintenance. We can use the renewables for irrigation in very remote areas. The irrigation can allow farmers to farm all year round and alleviate poverty. This opportunity is huge.

**Finance**

With the coal plant, the government or the Volta River Authority (VRA) needs to secure a loan for its construction. This will be on the balance sheet of VRA. There will be no need for the government to borrow one cent under a renewable energy alternative. The most the government will need to do is issue a sovereign guarantee.

The loans for renewable energy will be taken by the private sector who will rather pay taxes including income tax on workers. This part needs further explanation because this is the main reason why people complain that renewable energy, example solar, is expensive. Solar is expensive because we do not have the mechanism to pay monthly.

In Ghana, one usually has to to pay cash for solar energy installation. The West never gained accessibility to solar by asking people to pay cash. In the United States, the United Kingdom and the rest of Europe, all one has to do to get solar installed is to pick the phone and call the solar company. They will install the solar system and it is paid for monthly just like any other bill. Just like electricity is paid for to the Electricity Company of Ghana (ECG).

In essence, the 1.5 billion USD would be used to set up a fund managed by the banks and allow everybody to borrow from to buy an energy solution based on renewables. It will be the best fund set up because it will be backed by reliable and needed assets.

**Credit : Dr. Kobina Nyanteh (CEO, Translight Solar Limited)**