EXPLORING RENEWABLE ENERGY FOR SUSTAINABLE DEVELOPMENT: THE LOLLAND-FALSTER EXAMPLE (2)

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Lessons:

In this crucial era of climate change, it is encouraging to see Denmark making use of its abundant wind energy resource by building wind mills all over as the 'Green Energy Lolland – Falster' project in particular, seeks to portray, in that country's efforts to cater for its energy needs, using energy efficiency methods.

No doubt, wind energy alone accounts for 20 percent of Denmark's total energy needs, while that country has also been making efforts to explore the possibility of using sea waves to generate alternative energy. It is important to note that one wind mill has the capacity to generate 30 megawatts of power which is sufficient to cater for the energy needs of a whole community in Denmark.

For developing countries, it is obvious that we have a lot of natural resources with the potential to produce alternative energy, to combine with the traditional sources such as hydro – electric power and thermal energy technology, which are not environmentally friendly and also susceptible to climate change.

This has been proved in Ghana and elsewhere in the developing world where the energy systems are very precarious because of heavy reliance on the hydro – electric dam technology in particular, where hydro dams are at the mercy of the climate, and could dry up and create energy crisis.

Solar Energy:

Countries situated within the tropics in sub – Saharan Africa, for instance, can make good use of the abundant sun shine and go into solar energy production, and if possible, export the commodity to earn extra foreign exchange to facilitate the development process.

There are also prospects for such countries veering into biomass projects to support large scale bio – fuel production also as alternative/renewable energy.

If abundant wind can be effectively harnessed and tapped through wind turbines on wind farms to generate electricity elsewhere, then Ghana and sub – Saharan Africa as a whole can also explore the

abundant sun shine they have been blessed with, and embark on solar technology projects to help solve their energy needs?

Fortunately, in Ghana's case, it is very positive that something is being done about solar technology, after all. Some solar energy pilot projects have been on going, and experiment carried out so far has yielded positive results in the country's efforts to develop solar technology such as the production of solar panels, solar efficiency bulbs, etc, to help promote energy efficiency.

This is encouraging, notwithstanding that progress is very slow due to some operational bottlenecks such lack of capital and other logistical support. There is also abundant wind in some locations that could also be explored by the country to develop wind technology as alternative energy.

Worth mentioning is the story of the construction of a plant to generate between 30 and 52 megawatts of electricity from garbage in Kumasi. The 136 million project is expected to generate energy from the Kumasi Metropolitan Assembly's (KMA) landfill site at Oti to serve the Kumasi metropolis, depending on the waste supplies to the land fill site per day.

The KMA efforts should encourage other metropolitan, municipal and district assemblies to follow its foot steps and resort to effective waste management practices in disposing the heaps of garbage in their areas of jurisdiction, in an effort to deal with the perennial huge environmental problems the practice seem to pose to the society.

The gas from the waste material will be used to generate energy, with the metropolis generating 1000 tonnes of waste per day as at the launch of the project in May 2007. The Government of Ghana through the Ministry of Local Government and Rural Development signed a contract with the contractors, Cinergex Solutions Limited of Canada for the construction of the plant.

There are also ongoing efforts to explore the possibility of using nuclear energy as an alternative source of power in the country. A committee of experts tasked by the previous administration in April 2007 to examine the feasibility of the country embarking on such a project, has already given the 'green light' in its report which it submitted to the then government before leaving office.

It is hoped that the current administration continue from where its predecessor left off, and make efforts to implement this nuclear energy project, which energy experts maintain is safe and environmentally friendly, once all the safety precautions are strictly adhered to.

Another great efforts at exploring renewable energy, is the recent disclosure by the Volta River Authority (VRA) that it would embark on a wind energy project to augment the country's energy requirements. This is a bold move that must be encouraged and given all the support.

According to Engineer Kirk Kofi, Deputy Chief Executive of the Volta River Authority (VRA), the authority was considering a wind farm to add to their portfolio, and expected to be able to generate an additional 50 megawatts of power. He noted that even though wind energy farm was capital intensive, its long term benefits at complimenting the energy needs of Ghana was enormous.

He made the disclosure in Accra on June 27, this year during a three day workshop on Clean Development Mechanism (CDM) financing. All these are positive indicators that Ghana is on course, with respect to exploring the use of alternative energy.

There is the need for a strong political will to act as a pivotal and encourage the governmental and non governmental sector to marshal the necessary resources and embark on renewable energy projects for sustainable development.

That is why Ghana needs to redouble its efforts, to explore multiple sources of green or renewable energy, to operate along side our traditional major energy sources to help solve our ever growing energy challenges.

It is worth nothing that whereas our hydro-electric dam at Akosombo and Kpong respectively operate at the mercy of the climate, the Aboadze thermal plant on the other hand, has high operational cost, and has been exerting a lot of pressure on the national kitty because it has to be powered by expensive fuel and natural gas, besides the environmental hazard it creates by way of CO_2 emissions.

Another such project which comes to mention is the Sunon Asogli Power Plant project estimated at 600 million dollars and which is expected to generate 560 mega watts to supplement what the VRA currently generates upon completion.

Happily, the construction of a third hydro dam project, the Bui Dam is also ongoing, to augment the current national energy stock. But then the project is not an end in itself as experience shown, especially when the issue of environmental sustainability of this project and its likes come into play.

It is for this reason that as a developing nation seeking to develop our resources on a sustainable basis, we should be mindful that the best energy efficient practice must be a combination of exploring the use of both traditional and renewable energy sources.

Cost:

To say the least, the fact that the cost element in the execution of renewable energy projects is capital intensive, then becomes very enormous and a great challenge to Ghana and other developing countries, which are ironically the most vulnerable to the adverse effect of climate change, and need to embark on green energy and other climate change adaptation and mitigation projects in an effort to offset the effects of the phenomenon.

It is regrettable that Africa and the developing world, at the same time lack the resources to institute mitigation and adaptation projects, including embarking on renewable energy projects to promote energy efficiency.

A greater solution lies in the determination of the developed countries, whose activities lead to the greater emission of CO2 and other Green House Gases (GHG) which greatly adds to climate change, to commit financial and other material resources to developing countries under the Clean Development Mechanism (CDM) and carbon trading under the Kyoto protocol of the United Nations Framework Convention for Climate Change.

Having the expertise, the developed countries owe it a responsibility under the CDM treaty to engage developing countries, assist them financially and in the area of technological transfer in order for developing countries, to be equipped with the relevant technological skills in renewable energy as well as in other areas of life, which climate change is having a toll on.

United States President Hussein Barack Obama reaffirmed this in a speech to Ghana's Parliament during his historic state visit to the country in July, when he asked the developed countries to work with Africa to change the climate change crisis it is facing into an opportunity. "Together we can partner each other on behalf of our climate and prosperity and help countries to increase access, while skipping the dirtier phase of development", he said.

Observing that across Africa, there is bountiful wind and solar power, geo-thermal energy and bio-fuels; President Obama was emphatic that Africa's bountiful natural gifts can generate its own power, while exporting profitable green energy abroad.

Fortunately, the issue of the developed countries providing funds to developing countries to embark on climate change adaptation and mitigation projects is featuring prominently at the impending UN climate summit in Copenhagen. It is hoped there will be a significant breakthrough to pave the way for developing countries to benefit significantly from such a deal and to hive a sigh of relief!