**AFFORDABLE RENEWABLE ENERGY AS SOLUTION TO GLOBAL WARMING AND CATALYST FOR ECONOMIC DEVELOPMENT**

The aim of this discussion is to show how proper allocation and harnessing of Renewable Energy Resources (RES) can drastically reduce the hazards of global warming and ameliorate poverty by rising economic developmental challenges especially for developing and poor nations. Renewable energy is defined by the online dictionary Wikipedia as “energy collected from renewable sources which naturally replenish on the human time scale such as sunlight, wind, rain, tides, waves and geothermal heat. Renewable energy often provides energy for four important areas: electricity generation, air and water heating or cooling, transportation and rural (off grid) energy services.

Then what is global warming? According to Wikipedia ”global warming is a long term rise in the average temperature of the earth climate system, an aspect of climate change shown by temperature measurements and by multiple effects of the warming” the term commonly refers to the mainly human-caused observed warming since pre-industrial times, and its projected continuation, though there were also much earlier periods of global warming; more specifically global warming relates to worldwide surface temperature changes. It is necessary to understand the effects of climate change in order to marry it to best renewable energy and environmental practices and the attendant improvements that irrigation of global warming by renewable energy.

Today in the near future, global warming is the culprit for rising sea levels, changing participation and expansions of deserts in the swab tropics. Warming is expected to impact greater over land than over water with continual retreat of glaciers, permafrost and ice sea, other changes include frequent extreme weather events such as heat waves, droughts, wildfires, heavy rainfall with floods, heavy snow fall ocean acidification, species extinction and health hazards effects which are significant to humans include food scarcity.

With the abandonment of populated areas, we need to mitigate the responses of society to global warming which includes emission reduction, adaptation to its effects, building new systems resilient to its effects and future climate engineering. There is no doubt that mitigation of global warming by renewable energy adaption and deepening is evident. Unfortunately, the technology for widespread use of these resources are still expensive and beyond the reach of the poor developing nations and emerging economies. These countries contribute insignificant amounts of carbon dioxide to the atmosphere compared with the industrial nations, It therefore behaves on the industrialized nations to reduce their carbon footprints and buy out future carbon foot points of the poor developing nations by encouraging the countries to explore renewable energy by either making technology affordable or outrightly paying for renewable energy technology of these countries

The primary advantage of renewable energy is that fewer potentially harmful emissions are released into the atmosphere. Although fossil fuels are used to create the products that allow us use the power from renewable sources, most renewable energy become carbon natural in 5 years or less. Widespread use of renewable Energy through its affordability will refer the following advantages which will solve the global warming questions: -

1. It is a technology instead of a fuel
2. Renewable energy is stable
3. It provides foundation for energy independence
4. Multiple forms of renewable energy exist
5. It is safe, abundant and clean to use in comparison to fossil fuels

The questions then is how do these advantages serve as a catalyst to economic development and prosperity. Today 14% of the world’s energy is generated from renewable sources. According to the IRENA reports accelerating the transition to a renewables based energy system represents unique opportunity for meeting climate goals while fueling economic growth, creating new employment opportunities and enhancing human welfare. The world is united in the commitment to release the opportunity attested to by the inclusion of renewable energy targets in the plans will drive implementation of Paris agreement.

The need for scaling up renewable energy is now undisputed and the full range of benefits they can bring has come to therefore in global discussions. The paper “Renewable Energy and benefits; Measuring the Economics” provides the first global quantification of the macro economic impacts of renewable energy development. It finds that doubling the share of renewables by 2030 would bring a range of positive impacts including increase in global gross domestic product (GDP) up to 1.1%, improvement in global welfare by 30% and over 24 million people working in the renewable sector

To bring it home to Nigerian publication, sustainability in its article “Sustainable Energy Development; The Key to a stable Nigeria – Kalu Uduma and Tomasz Arciszewski opines that Nigeria’s chance to raise the standard of living for its citizens and stabilize social, economic and political systems lies in its commitment to increase energy output and utilization starting at the grassroot level. However, Nigeria cannot afford to include in the traditional exploitation of depleting energy sources such as wood and fossil fuels. In the past 20 years, power outages have transformed the once vibrant Nigerian nation from a country whose economic potential was clearly evident to a country whose economy is reliant on the volatile and dismantling fossil fuel market. This is because there is a strong statistical correlation between energy consumption and economic prosperity.

The consequences of acute energy shortage in Nigeria has been stifling economic opportunities and growth at the grassroots level. Primal power cuts stifle manufacturing and infrastructural development in the cities. A document evidence claims that 3,000,000 acres of deforestation occurs annually in Nigeria. To effectively tackle these dementing challenges, Nigeria has to look seriously into the creation of renewable energy for relief and we recommend that the following is done quickly;

1. Government should encourage entrepreneurs to aggressively pursue Solar Energy Generation with a land mass stretching between Latitude 5˚ South and 15˚ North and 290 days of Sun light yearly the potential and viability of solar in Nigeria show great promise. Solar insolation is estimated at between 40 kw/h/m2 at the south coasts and 7.0 kw/h/m2 per day in the northern part of the country. That is 5.5 kw/h/m2 per day. This would greatly :
2. Enhance the health and wellbeing of natural communities
3. Catalyze the development of non – and -pop cottage business
4. Stem urban migration which will help
5. Develop Biomass Technology. In Nigeria, every village has its own open dumpsite (land fill)

Where for many years the communities waste is dumped. Due to the composition of these waste over the years the land fill poses health problems for the village. With the use of Biomass technologies , these hazards will be termed into viable energy resource from Waste to Wealth.

Conclusion:

The economic and social opportunities that sustainable energy systems can bring are significant attractions for various private and federal organizations in Nigeria to invest aggressively in the new systems. However, an orderly adaptation process to the new energy system must be followed. The authors have proposed such a process. They have: (a) Identified solar powered electric energy and biogas generation through biomass technology development as systems enterprises that will create maximum benefit at the grassroots level in both the rural and urban communities of Nigeria; (b) Recommended as a priority the need to modify the current energy generation and distribution monopoly in Nigeria and allow decentralized investment and development of sustainable energy systems; (c) Recommended the creation of a triad joint research synergy between a foreign research institution, two or more research institutions in Nigeria and a renewable energy development professional who will bring about the execution and implantation of research results into practice; (d) Identified the distributed social infrastructures that will benefit from the identified sustainable energy sources; and (e) Recommended financing models that will help stimulate sustainable energy development and make it affordable to citizens. The authors have also recommended the establishment of Renewable Energy Business Incubators at several select research institutions in Nigeria. The overall objective of the Business Incubators will be to develop renewable energy technology and its benefits and create a technical culture in Nigeria. The centers will (1) stimulate solar energy and other renewable energy inventions and innovations, (2) develop academic courses on inventive design in the context of renewable energy at technical colleges and universities, (3) coordinate inventive and innovative ideas in sustainable energy from other local technical colleges and universities, and (4) solicit financial and logistic support for inventors to develop their patentable/patented inventions for mass production and marketing. Finally the authors recognize how economic trends in the world trace their roots to local instabilities in many countries such as Nigeria and how this destabilization has ripple effects in the global economy. The authors therefore believe that the world also has a stake in a stable and secure Nigerian nation that the investment and development in sustainable energy systems can bring.

At UKPA Hansa Energy Solutions we are at the fore front developing Sustainable waste management practices such as source sorting, recycling, reuse mans waste another mans resource. We are also building the first Refuse Derived Fuel plant in Nigeria a clean, green, Alternate fuel which is needed for lime furnaces and cement kilns to replace hazardous coal. We have in joint venture independent power project with the State government started the ground work for refuse derived fuel waste to electricity. Which by-products will include portable drinking water, hot water etc. We start the forefront of developing solar power generation in the country through the work our NGO light up Africa Care Foundation for young children in off-grid communities, medical facilities and village inclusion in line with socio development goals SAGS and MAGS, in urban areas we have started a process of power audits and retrofit for water and lighting to prevent wastage of scarce electricity resource.

You are welcome to interact with our staff and benefit from our different packages aimed at bringing renewable energy to your homes, offices, shops and industries.

Thank you for listening.

Chief Ewie Aimienwauu FCID

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