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Conserving the Environment through Solar (Renewable) Energy Sources in Northern Uganda

By**Our Reporter**

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As one way to reduce the emissions that pollute the environment, developed countries have adopted renewable energy such as solar, wind, geothermal, hydropower, and ocean energy.

However, several developing countries still suffer a blow as they depend on non-renewable sources of energy such as; Petroleum, coal, natural gas, and nuclear power, among others.

The German Agency for International Cooperation (GIZ) has 31st October 2022 begun training 20 students from various parts of northern Uganda on solar installation and photovoltaic courses as they launch the course that will take three years at the Alarm technical and peacebuilding center.

A photovoltaic system, also a solar power system, is an electric power system designed to supply usable solar power utilizing photovoltaics.

These consists of an arrangement of several components, including solar panels to absorb and convert sunlight into electricity, a solar inverter to convert the output from direct to alternating current, as well as mounting, cabling, and other electrical accessories to set up a working system.

It may also use a solar tracking system to improve the system's overall performance and include an integrated battery
The Principal of Alarm technical and peacebuilding center, Rev. Enenu Olika said that the new course being launched at the school is one of its kinds in the district including other districts such as; NUYDC in Omoro, Kora technical institute in Zombo, and UTC in Lira.
Rev. Enenu said that this training will not only help in conserving the environment but also in job creation for the trainees in a related field. The training covers biogas, and ecosystems, among others.
"We urged the youths to enroll for the course that is scheduled to open formally next year that will see our youths engage in preferring renewable energy sources other than non-renewable energy sources such as coal, fuel like petrol, among others," Enenu expressed.

Group post for a photo after day one of the training

Prosy Anek Ayoo, one of the trainees from Dok-Lokoro west village, Kulu-yer parish, Padibe town council in Lamwo district stated that the training will enhance her income while at the same time learning how to install solar panels. Nancy Aneno, a resident of the Pader town council and one of the trainees said that the training is very good and expressed her disappointment since the ladies are few in the training.

According to her, this training will help her to identify the different solar that people use in their daily life apart from setting up her electrical shop.
An expert and consultant for renewable energy with the GIZ solar PV training, Mr. Manfred Franz Becker said that the training is part of the Promotion of Renewable Energy and Energy Efficiency (PREEEP) project funded by the German government and GIZ to conserve the environment.

According to Manfred, the training is taking place in northern Uganda basically, about capacity building in solar PV systems. The identification of the participants was done by the different institutions that will take three courses.

The training, due to the different contents, will be understood differently and consumed differently. Renewable energy is the best form of energy since it does not emit bad gas emissions into the environment.

Manfred said that too many people in Uganda are using generators that pollute the environment and our surroundings.

"There's a need for a mindset change concerning the ongoing environmental pollution since most of the population does not know renewable and non-renewable energy sources," Manfred added. According to ESI Africa newspaper, the electrification rate has been rising, slowly, but steadily from less than 10% in 2010 to 15% in 2014.

As a result, electricity demand is increasing at an annual rate of about 6-8%. It has been noted that the Ugandan government policy to some extent is not favoring the investment of people in the renewable energy sector despite abundant ideologies from experts.

In the same publication, Ugandans stand at only 7% with access to renewable energies and 97% depending on biomass.

By definition, Biomass is plant-based material used as fuel to produce heat or electricity.

Examples are wood and wood residues, energy crops, agricultural residues, and waste from industry, farms, and households.

According to World Bank development indicators, Uganda still lags despite having numerous sources of electricity generated from the rivers.

Access to electricity (% of the population) in Uganda was reported at 42.07 % in 2020, according to the World Bank collection of development indicators, compiled from officially recognized sources. Uganda – Access to electricity (% of the population) – actual values, historical data, forecasts, and projections were sourced from the World Bank in November of 2022.

The graph below shows access to electricity since 2000 to 2020 in Uganda

Source: World Bank

Since the Industrial Revolution, fossil fuels have become the dominant electricity source for most countries across the world.

But the burning of fossil fuels – coal, oil, and gas – is responsible for around three-quarters of global greenhouse gas emissions. They are also a major source of air pollution, which is responsible for at least five million premature deaths every year.

For both climate change and human health, we want to transition away from fossil fuels. But how quickly are we making progress on this?

Energy in terms of cost (solar and electricity) in Uganda

According to research done by the New Vision, over 14 millions of Ugandans are benefiting from solar off-grid solar power model that's used for transforming rural energy access across Africa;

An EIB financing to overcome barriers to 80% of Ugandans without access to electricity; Local currency financing to accelerate PAYGO solution for affordable green energy," a statement from ENGIE Africa said.

According to Manfred, an engineer with GIZ, solar is an immediate cheap way of getting access to energy resources without spending too much. Majority of

impoverished households in Northern Uganda uses at least solar when compared to electricity generated from other sources.

Only 40.2% of households have access to electricity when compared to 87% who access solar power for household's activities.

Yoven Moorooven, the chief executive officer of ENGIE Africa noted while talking to the New vision; "At ENGIE, we see the massive potential of the off-grid electrification

sector as a way to bridge energy gaps across Africa, faster and more affordably. Every day families across Africa are able to access electricity for the first time using off-grid solar technology provided by ENGIE Africa."

Power in Uganda prices ranges from $ 0.24 to $ 0.32 per unit. This happens because of the third parties that are involved in reselling the power to the final consumers with intention to get profit accompanied by heavy taxes from the players.

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