




The Gambia explores wind energy, hydrogen to achieve energy access

 By Nicolette Pombo-van Zyl September 13, 2023



Visualisation of Enercon Turbines in NEK's planned 250MW Konikablo wind farm, Ghana. (Picture Source: NEK)

The signing of a Memorandum of Understanding raises wind energy focus for The Gambia.

As of 2022, The Gambia recorded access to electricity for 69% of the population, while the country's national agenda envisages full electricity access at the household level in urban areas and the community level in rural areas by 2030.

However, a challenge for Gambians is that they pay one of the highest electricity tariffs worldwide, with an average above \$0.23 per kWh in 2023, resulting from the expensive use of fossil fuels and power plants.

To address achieving universal, clean energy access, the government of The Gambia has signed a MoU with Swiss renewable energy firm NEK.

The MoU sets out to develop 200MW of onshore and 350MW offshore wind capacity while exploring green hydrogen at scale. The renewable energy company will develop the wind farms over several phases.

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We started measuring the wind conditions in The Gambia in early 2022. – NEK (see image below)

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Achieving clean and sustainable energy access

NEK's wind farms will contribute to the country achieving its 100% energy access goal while supporting an essential step towards The Gambia's declared Nationally Determined Contributions (NDC).

The Gambia ratified the Paris Agreement and published its second NDC in 2022. The country's second NDC iteration addresses the national power sector's expansion of renewable energy technologies.

Once commissioned in 2026 to 2027, NEK's wind projects will produce the first clean, sustainable, never-ending and homemade electricity for The Gambia, and the price per kWh for end users will drop sharply due to the relatively low generation costs of the wind farms.

In addition, more power capacity is required in The Gambia in the years to come, which will also be provided by the wind farms. The country will be in an excellent position to export surplus electricity to surrounding countries via the West African Power Pool network.

Further to this development, the country can use the clean energy produced in the wind farms to generate green hydrogen, which is seen as the “fuel” of the future. In a recent report, the European Investment Bank (EIB) estimated that the potential for green hydrogen in Africa will be around 1 trillion euros (\$1.06 trillion) by 2035.

NEK's wind energy developments in The Gambia

“We started measuring the wind conditions in The Gambia in early 2022,” states NEK, reporting that the results for the first complete measurement year were “promising.”



Wind measurement in The Gambia. Image source: NEK

This information triggered the next development steps of the projects. Based on this approach, the government of The Gambia and NEK decided to sign an MoU which defines the standard procedures for developing the wind farms.

The onshore wind farm with a preliminary capacity of approximately 200MW is planned for the country's southern coastal region, with further investigations on the specific locations required.

Not far from the onshore wind farm, the 350MW offshore wind farm will be situated between 5 and 15km off the coast of The Gambia in relatively shallow waters, says NEK.