

## Top story in this newsletter — Does Kenya need nuclear?

The 28th United Nations Climate Change Conference (COP28) saw nuclear energy take center stage as a viable solution to combating climate change. With 24 countries pledging to triple their nuclear energy capacity by 2050, and the global stock take calling for accelerated adoption of nuclear energy, the discourse around nuclear power has significantly evolved.

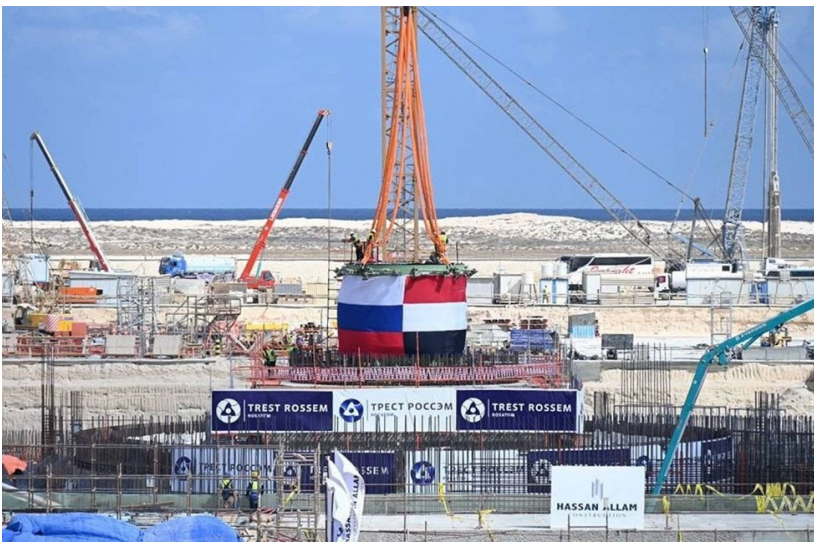


*Global Leaders Unite at COP28, Emphasizing Accelerated Adoption of Nuclear*

During COP28, world leaders and innovators in climate change solutions recognized the crucial role of nuclear energy in achieving deep, rapid, and sustained reductions in greenhouse gas emissions. The Nuclear Regulatory Authority (KNRA) in Kenya highlighted the country's readiness to embrace nuclear applications, with plans to operationalize its first nuclear power plant by 2036.

Contrary to past concerns, nuclear energy offers several advantages in addressing climate change, generating electricity with virtually no direct carbon emissions. The KNRA emphasized the importance of nuclear power plants in building resilient energy infrastructures capable of withstanding the impacts of climate change, urging skeptics to embrace nuclear energy as a long-term cost-effective and reliable source of electricity.

As countries strive to diversify their energy sources and reduce carbon emissions, the global nuclear renaissance is gaining momentum, with African countries like Egypt already making strides in nuclear development. Egypt's Nuclear Power Plants Authority (NPPA) partnered with Rosatom to embark on a significant nuclear energy project. Construction of the first and second reactors commenced in 2022, with groundwork for the third reactor laid in May 2023. This ambitious undertaking represents a substantial investment, with the total cost of the nuclear power plant estimated at approximately \$30 billion. Egypt anticipates the completion and full operationalization of the nuclear power plant by 2030.



*Progress in Motion: Construction of Dabaa Nuclear Plant in Egypt.*

The Olkiluoto 3 Nuclear Power Plant in Finland, Barakah in the UAE, Shin-Kori 4 in South Korea, Sanmen 1 and 2 in China, and Leningrad II-1 in Russia are some of the newest nuclear power projects. These projects have faced delays due to various issues such as construction problems, safety concerns, and regulatory checks. Despite setbacks, these plants are nearing completion or have already started commercial operations, contributing to the global expansion of nuclear power technology. Emirates Nuclear Energy Corporation (ENEC) recently announced (March, 2024) the successful start-up of the fourth unit at the Barakah nuclear power plant in the United Arab Emirates. This milestone was achieved by ENEC's operating and maintenance subsidiary, Nawah Energy Company, marking another significant step towards a sustainable and clean energy future for the UAE.



***Barakah Nuclear Power Plant: Paving the way for a clean energy culture.***

The discussions at COP28 underscored the growing recognition of nuclear energy as a key component of the global transition to clean energy, signaling a paradigm shift in attitudes towards nuclear power as a vital tool in combating climate change. In Kenya, where the energy landscape comprises various sources including geothermal (863 MW), hydro (838 MW), wind (436 MW), biomass (2 MW), solar (173 MW), and thermal (678 MW), \*(Credits to Nation Africa for the energy capacity data) \*

The prospect of constructing a nuclear power plant, such as South Korea's APR-1400 with a capacity of 1400 MW per reactor, holds promise as a significant contributor to the country's energy grid. This exemplifies how nuclear energy can provide a substantial capacity of energy, further emphasizing its potential in meeting the world's growing energy demands while mitigating climate change impacts.

Kenya's ambitious plans to embrace nuclear energy are gaining momentum as preparations to build the country's first nuclear power plant by 2036 are well underway. Commencement is scheduled to start in 2027. With a site already identified along the Coastal belt and feasibility studies in progress, the Nuclear Power and Energy Agency (NuPEA) is spearheading the initiative. In an interview in KBC television on the 7th of February 2024, CS. Justus Wabuyabo, CEO of NuPEA, revealed plans to release international tenders for the construction, signaling Kenya's commitment to diversifying its energy mix and addressing rising energy demands. This strategic move underscores Kenya's determination to harness nuclear applications for sustainable development and energy security, positioning the country as a front-runner in Africa's nuclear energy landscape.

To address the question on whether Kenya needs Nuclear, the answer is a resounding yes. As Kenya continues to strive for industrialization and economic growth, a reliable, adequate, and substantial power supply is essential. The inclusion of nuclear energy in our energy mix offers a promising solution. Not only does nuclear power provide massive energy capacity, but it also does so with minimal greenhouse gas emissions, aligning perfectly with our climate goals. It offers a clean, safe, and reliable source of energy that can power our industries and homes for generations to come.