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POTENTIAL DEPLOYMENT OF A SMALL MODULAR REACTOR TO RUN THE STANDARD GAUGE RAIL NETWORK IN TANZANIA

The United Republic of Tanzania (URT) is currently expanding its rail network with the construction of a Standard Gauge Railway (SGR), spanning approximately 2,000 km from Dar es Salaam to Mwanza and Kigoma, and from there linking the URT to Rwanda, Burundi, and the Democratic Republic of the Congo. The SGR's operations will rely on electricity from The Tanzania Electric Supply Company (TANESCO). According to TANESCO, Tanzania faces power shortages due to various factors, including drought. Given the need for a reliable power supply for the SGR, Small Modular Reactors (SMRs) are being considered as an alternative source unaffected by drought, unlike hydropower. Reports indicate that Tanzania's power installed capacity is 1,938.35 MW as of December 31, 2023, with 63% from natural gas, 32% from hydropower, and 5% from diesel and biomass. With the ongoing climate change and the increasing power demand which is growing at a rate of 10-15% per year, the introduction of SMR in the energy mix is important. Clearly, the deployment of SMR in Tanzania will facilitate the implementation of the country's sustainable industrial development policy and the country's commitments to the Sustainable Development Goals. The potential for deploying SMR in Tanzania is assessed and reported.

Country OR International Organization

United Republic of Tanzania

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YES

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