Rwanda will build a test nuclear reactor using novel technology under an agreement between the East African country and a Canadian-German company called Dual Fluid Energy Inc.

The deal was signed on Tuesday, September 12, in a new partnership between Dual Fluid Energy, a Canadian-German nuclear technology firm and the Rwandan government.

The reactor will use an innovative technique developed by the startup company using liquid fuel and lead coolant, resulting in less radioactive waste, the Rwanda Atomic Energy Board said in a statement.

The demonstration reactor is expected to be operational by 2026 and the subsequent testing of the Dual Fluid technology is to be completed by 2028.

The test phase will cost 70 million euros ($75 million), to be financed by the company, Dual Fluid CEO Goetz Ruprecht told a news conference in Kigali.

Rwanda generates electricity with a capacity of 33.2 megawatts (MW) from hydropower dams, and the rest from methane, solar and peat.

At present Rwanda has an installed electricity generation capacity of 332.6 megawatts(MW), most of which is from hydropower dams and the rest from methane, solar and peat.

Rwanda Atomic Energy Board (RAEB) Chief Executive Fidel Ndahayo said that they had agreed with Dual Fluid on a road map for the implementation of the test reactor after the tests are complete.

“Once success criteria are achieved, both parties will proceed with next technological readiness levels including testing of the nuclear power plant design, construction and operations based on the experiment results.” Ndahayo added.