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## Ingula Unit 1 comes into commercial operation

A third unit of Eskom's Ingula Pumped Storage Scheme came into commercial operation on Tuesday, 30 August, said the power utility.



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"Eskom's Ingula Pumped Storage Scheme yesterday brought Unit 1, which is the third unit out of four, into commercial operation thus effectively pumping close to a 1000MW into the South African power grid," said Eskom in a statement on Wednesday, 31 August.

The three units of the scheme that are located on the cross-border of the Free State and KwaZulu-Natal have been contributing 333MW each towards Eskom's daily power needs during a testing phase.

"The commercial operation of these three units marks a key milestone towards the full commercial operation of the entire Ingula Pumped Storage Scheme ahead of the scheduled deadline of mid-2017," said Eskom chief executive Brian Molefe.

The commercial operation of the unit is further proof that the utility is on its way to ensure security of supply.

"The commercial operation of Unit 1 is further proof that we are well on our way to ensure security of power supply to South African homes and businesses. I am truly excited that we are on track to deliver on our commitment to bring all New Build projects on line timeously." The remaining unit (Unit 3) has already been synchronised to the national grid and is currently undergoing repairs after experiencing problems during the testing phase.

The unit is on track for commercial operation during the first half of 2017.

Once completed, all four units of the Ingula Pumped Storage Scheme will produce a total of 1 332MW. Upon completion, Ingula will be Africa's newest and largest pumped storage scheme, and the 14th largest in the world.

Last week, Eskom announced that Unit 2 came into commercial operation on Monday, 22 August.

The commercial operation of the two units follows on President Jacob Zuma's launch of Unit 4 at the plant in July.

During his visit to the plant, President Zuma said progress made is evidence of the country's democratic legacy that supports economic growth and development.

Eskom Ingula's four units are located 350 metres underground in the world's largest machine hall in mud-rock. To turn the more than 500 ton rotating mass of the Generator Rotor and Turbine, water is released from Ingula's upper dam, Bedford Dam, situated 460 metres higher and two kilometres away.

Water then flows at high speeds down to the turbines at around 60km per hour with enough water passing through each turbine to fill an Olympic-sized swimming pool in six seconds. Rotating at 428 revolutions per minute, each unit will produce 333MW, a total for the station of 1,332MW.

On completion of all four units, Ingula will be part of Eskom's Peaking fleet of power stations. It can respond to demand increases on the national grid within two-and-a-half minutes.

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