

# Final unit at Ingula synchronised

Eskom on Saturday, 29 October, synchronised Unit 3 of the Ingula Pumped Storage Scheme.



Image source: [www.eskom.co.za](http://www.eskom.co.za)

Unit 3 at Ingula, which is located on the cross-border of the Free State and KwaZulu-Natal, is the final unit to be synchronised.

In a statement on Sunday, Eskom said Unit 3 was previously synchronised to the national grid on 6 March 2016 and supported the grid until 6 April 2016 when an electrical incident occurred.

“After almost 500,000 man-hours of work without any safety incidents, the team completed the repair and has synchronised the unit back onto the national grid,” said the power utility.

Synchronisation is the process whereby the generator in the unit is electrically connected to the national power grid in such a way that its power is perfectly aligned with all the other generators to generate and deliver electricity into the national power grid.

Ingula’s Unit 4 went into commercial operation on 10 June 2016 while Units 2 and 1 were put into commercial operation on the 22 August 2016 and 30 August 2016 respectively.

Ingula's four units are located 350m 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 460m higher and 2km away.

Water rushes 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.

Upon completion Ingula will be Africa's newest and largest pumped storage scheme and the 14th largest in the world.

For more, visit: <https://www.bizcommunity.com>