

Garbutt Substation Upgrade Project Update



ERGON ENERGY NETWORK

Part of Energy Queensland

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The Garbutt substation takes shape as the project team takes to the skies to stand new concrete poles.

Garbutt substation works

Significant progress has been made in recent weeks inside the new substation building at Garbutt. The site has been transformed by Ergon Energy Network's specialist substation crews from a blank canvas to almost being fully kitted out as the new gas insulated switchgear (GIS) is installed – see figure 1.



Fig 1 – A look inside the new Garbutt substation building where Ergon's specialist substation crew is installing the GIS.

Digging deep to install the new 66,000-volt underground cables

We've also made great progress on the installation of conduit for the new 66,000-volt (66kV) underground cables, with Daly's (the contractors) digging deep to complete the installation of the electrical conduit for the new 66kV cables and telecommunications cables at the rear of the Ergon depot at Garbutt.

This involved open trench excavation along the Woolcock Street Service Road to install the underground 66kV conduit – see figure 2 – and works to install telecommunications pits at the rear of the substation – see figure 3.



Fig 2 – Excavation along Woolcock Street Service Road for the installation of electrical conduits which will house the new 66kV cable.



Fig 3 – Installation of the telecommunications pit at the rear of Garbutt substation.

With the installation of conduits now complete, the roadway, footpaths and verges around the worksites can begin to be reinstated – see figure 4 – and the new underground cable pulled through the conduits – see figure 5.



Fig 4 – New footpath installed after civil excavation to install conduit for the 66kV cables.



Fig 5 – The new 66kV underground cable rolls of a massive cable drum as it's fed into the new substation building.

Crews take to the skies to stand new concrete poles

Ergon's local overhead construction crews took to the skies in July to stand six new concrete poles and a timber pole alongside some of Townsville's busiest streets.

With each pole measuring between 21 and 27 meters tall, and weighing around 15 tonnes, safely lifting them into place requires perfect orchestration and millimeter precision.

Ergon's overhead crews coordinated specialist crane operators who lifted the poles into place using a 100-tonne crane and a franner, vacuum truck operators who removed excess groundwater from the pole holes to provide a solid foundation for the poles, and traffic control teams who kept the work crews, nearby traffic and pedestrians safe while the complex pole lifts were completed – see figures 6 and 7.



Fig 6 – Two new concrete poles are installed behind Garbutt substation. Ergon overhead field worker bolts the two halves of the 26-metre pole together.



Fig 7 – The top portion of the 25m concrete pole is carefully lifted into place in front of Macca's on Woolcock Street.

Now the new 66kV cables have been pulled through the conduits, they are ready to be secured in place on the poles and for our specialised high voltage cable jointers to connect them to Townsville's overhead network – see figure 8.



Fig 8 – New concrete poles behind Townsville City Council Depot ready for cable to be pulled and connected to the overhead network.

We want to express our sincere thanks to the team at McDonalds The Lakes and other surrounding businesses and patrons who have been so patient while this critical work on the electricity network was completed.

Getting in touch with us

Want to know more? You can [visit our project webpage](#) for more information. You can **register for future project updates by simply scanning the QR code**, or contacting our Senior Community

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