



gilghi

Providing water to remote communities



Off-grid containerised water treatment plant

Gilghi can provide clean water for over 100 people in standard configurations and is scalable for larger needs

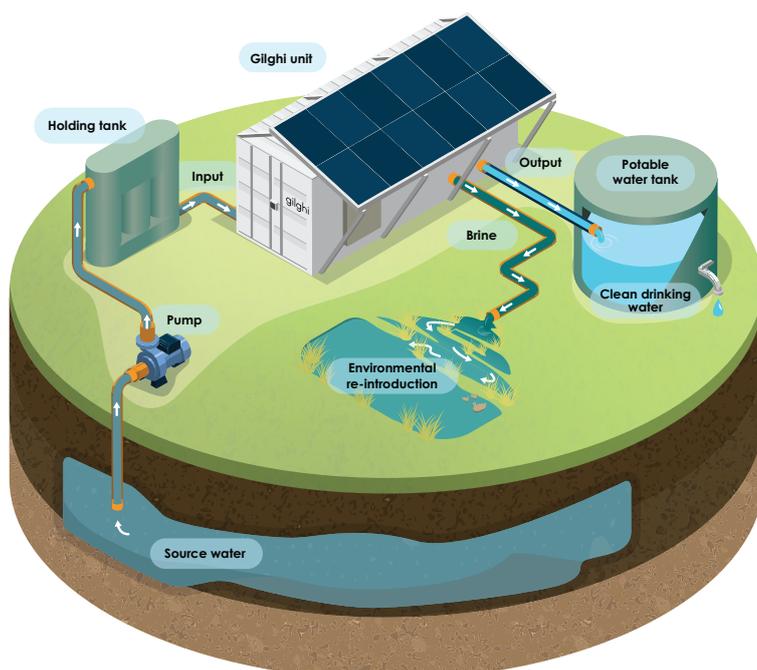


Water supply in remote Australia is getting harder due to prolonged drought and aging infrastructure. At the same time Australia aspires to higher standards and better outcomes through commitments to United Nations Sustainable Development Guidelines on water and Closing the Gap for Indigenous equality.

To solve this complex challenge we need to think about water infrastructure a little differently. Traditionally potable water was solved via massive centralised infrastructure of dams and large scale, power intensive, water treatment plants. In lieu of such infrastructure, sub-standard water quality remains, or water is trucked in to remote areas at high costs.

However, technology advancements particularly in relation to renewable power and battery storage are starting to enable a different approach – decentralised water infrastructure solutions. This approach allows clean water to be made available where users and remote communities need it, better resilience as the infrastructure is localised and use of smaller scale water resources at an affordable price.

The Gilghi small scale water treatment plant is at the forefront of this transition. It is a customised water filtration and treatment plant that produces crystal clear drinking water from any local accessible source. Treatable water sources include sea and river water, bore and surface water, even grey water and beyond. It has a fully integrated power system utilising an energy efficient design philosophy that employs solar, batteries and back up diesel generation to support standalone operations. The Gilghi unit is fully factory tested, and the containerised build allows easy transportation and plug and play commissioning.



Example Ground Water Configuration

Benefits

Better water, enabled by Gilghi, helps to deliver meaningful community and health benefits

Better Health and Wellbeing

Gilghi delivers clean and appealing drinking water. By removing contaminants such as metals, bacteria and viruses Gilghi delivers output that far exceeds the Australian Drinking Water Guideline requirements. This eliminates health risks associated with drinking unsafe water.



Water produced by Gilghi is dialysis approved.

In addition, Gilghi removes odours and impurities making tasty and appealing water. A resident at one of our Gilghi installations described the output as “the best water in the region”.

Less Pollution

Gilghi is driven by an integrated renewables led power system which minimizes emissions during operation. In addition, putting a Gilghi system in place can reduce vehicle emissions as the need for water tanker deliveries are eliminated taking vehicles off the roads.



Highly Competitive Lifetime Costs

Gilghi's smart approach to the power system to deliver leading water treatment technologies means the infrastructure cost is highly competitive with traditional approaches both for upfront and ongoing costs.



Community Infrastructure

Beyond providing clean water, Gilghi can become a piece of critical remote infrastructure by extending its power and communications capability to provide added benefits such as Wi-Fi hotspot or satellite comms and USB charging ports to the unit.



Local Employment and Reliable Support



Gilghi is designed to be serviced and supported by people in the communities it serves. After commissioning and basic training local people / businesses can be competent to provide first line services to Gilghi which in turn supports local jobs.

CPS National's comprehensive support, remote monitoring and national footprint is available to backup local operators and lead larger requirements for maintenance (or repairs). CPS National is part of the Ampcontrol Group, one of Australia's leading electrical ,electronic and infrastructure engineering companies.

Plug and Play Installation & Redeployment



The Gilghi unit is manufactured to the required specifications and tested in our workshops enabling plug and play installation and commissioning. This enables the unit to be readily redeployed to meet future needs. No white elephants or remnant infrastructure remains.

More Resilience



By placing a Gilghi unit next to the water source, water supply is protected from issues than can interrupt transporting water by pipes or road as well as major breakdowns at large centralized infrastructure.

In addition, the standalone power system of the Gilghi unit means the system is immune from troubles in the grid, such as downed power lines, and has diesel backup to provide extra redundancy.



Australia is committed to achieve Clean Water and Sanitation for all by 2030 under the UN Sustainable Guidelines. Australia is also committed to Closing the Gap to improve the lives of all Aboriginal and Torres Strait Islander Australians

Project Reference



GILLEN BORE

Located 78km north of Alice Springs, the Gilghi water treatment unit supplies the remote community of Gillen Bore with fresh clean drinking water throughout the year.



CPS National, as part of Ampcontrol Group, successfully designed, built and commissioned the off grid containerised unit, which contains a remote monitoring function that operates via satellite due to the remote location.



**GOOD
DESIGN
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The Gillen Bore water treatment unit is sponsored by the Northern Territory Government through the Department of Local Government, Housing and Community Development.

