

Tech

# So 2021: This ASX-listed tech play wants to build a supercomputer backed up by green hydrogen

May 26, 2021 | [Josh Chiat](#)

**SHARE**

Taking the onrushing wave of newly announced green hydrogen projects to its logical conclusion is a green hydrogen-powered supercomputer.

ASX-listed data-cruncher [Dug Technology \(ASX: DUG\)](#) yesterday announced plans to build what it says will be the world's first carbon-free high performance computing data centre.

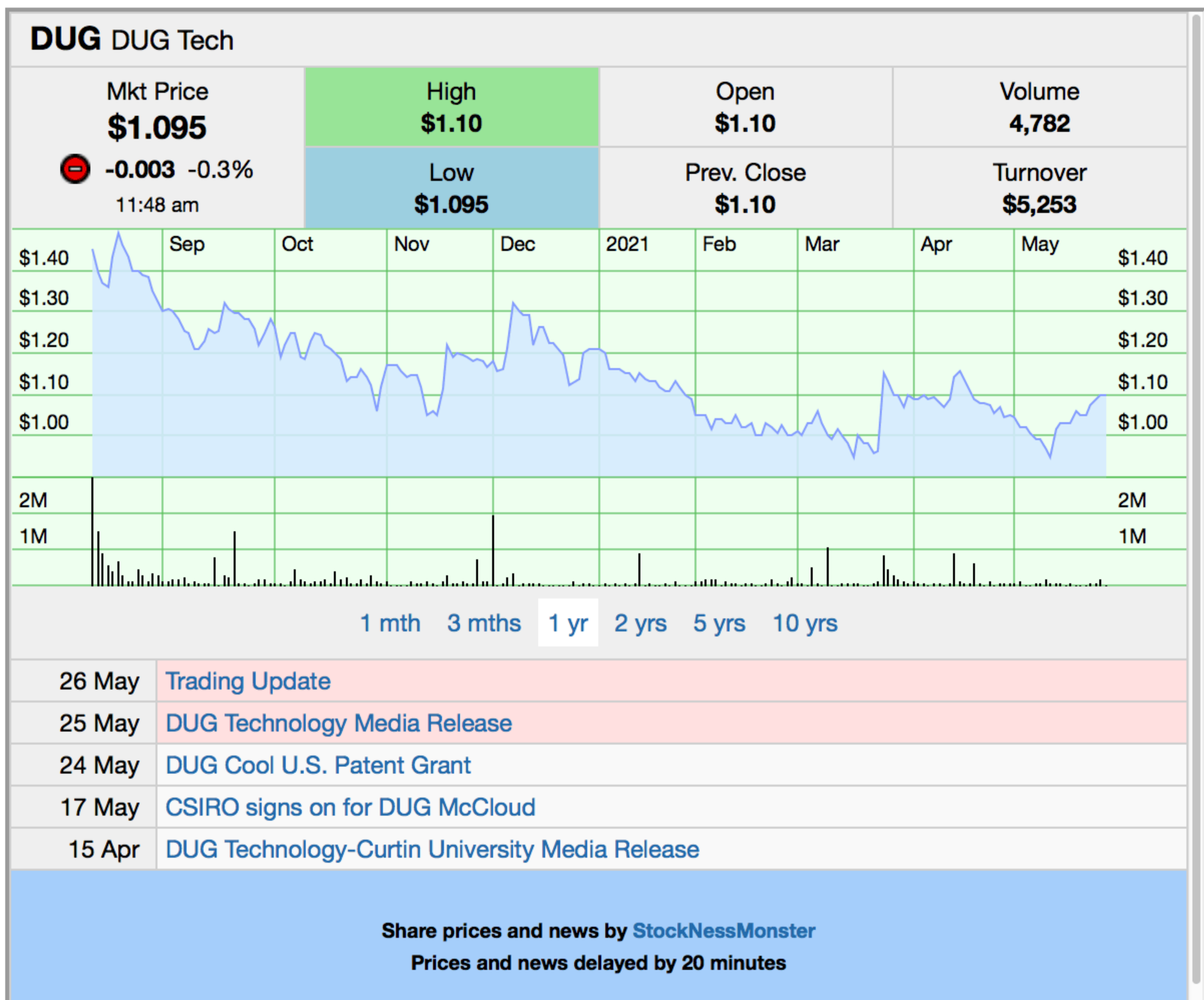
And it is looking to a site in regional Australia to make it happen, with \$5 million from cash reserves set aside to begin construction in the 3rd quarter of 2021 on a proposed 45 hectare lease near Geraldton, 400km north of Perth on WA's mid-west coast.

According to DUG, the initial model would boast a computing capacity of 200 petaflops, around 6.5 times the capacity of its four existing rooms in Perth, Kuala Lumpur, Houston and London combined, although computing capacity would only be added as demand comes on board.

The 6mw stage one data hall, which would be complete by the first half of 2022, could be scaled up over time to host multi-exaflops of capacity across 10 separate data halls.

All that must use up a heap of energy right? DUG says it plans to use wind and solar to achieve that, with “an onsite hydrogen energy battery system also being investigated as part of the project”.

### DUG Technology share price today:



## Location, location, location

Why Geraldton? It has become a hive of proposed activity around the renewable energy space due to its sunny climes and heady winds, which make it ideal territory for wind and solar power generation.

The WA Government wants to make the long-mooted Oakajee industrial precinct a green hydrogen hub 23km to the north, while gas supplier ATCO has a \$28.7 million commitment from the Australian Renewable Energy Agency to pursue a 10mw electrolyser at Warradarge in nearby Coorow.

Then there is the strategic proximity to the Australian site of the Square Kilometre Array, already a client of DUG's.

Located in the remote and sparsely-populated Shire of Murchison the multi-billion dollar project spread across sites in Australia and South Africa promises to use ultra-fast and detailed images from hundreds of antennas pointed at the night sky to answer the universe's big questions.

And with all that data it needs a lot of computing power to crunch the numbers in a timely fashion.

DUG says it has the support of the Yamatji Nation Board, with the land on which the project will be based set to pass to the Yamatji Nation Trust as part of the Yamatji Nation Indigenous Land Use Agreement.

The company said it wants to work with the traditional owner group to deliver employment and training opportunities as part of the project.

## **Green (hydrogen supercomputer) is good**

DUG already uses a US and Australian patented cooling technology at its existing sites in an effort to reduce the energy consumption of its data halls by reducing their reliance on air-conditioning.

According to MD Matt Lamont this already reduces the company's energy consumption by about 51 per cent, but there remains an appetite from both DUG and end users to push this further.

**DUG has clients in the oil and gas sector**, whose own emissions and overall carbon footprints are facing increasing scrutiny amid the global push towards a net zero economy.

Lamont said new demand for HPC services is currently growing from government clients looking for a "triple bottom line" benefit.

Scientists on the SKA have also lobbied for decision makers to preference renewable-powered HPCs for the astronomy sector.

"They put out a **paper into Nature** last year where they put out their concerns about the carbon footprint of supercomputing in the radio astronomy sphere, so it's really important to most if not all of our clients," Lamont said.

- **Subscribe to our daily newsletter**
- **Join our small cap Facebook group**
- **Follow us on Facebook or Twitter**