



## Snowy 2.0 project progress

It's all action on the [Snowy 2.0](#) project construction sites at Lobs Hole and Polo Flat!

A barge is being used to lay fibre optic cable in Talbingo Reservoir as part of the construction and operation of Snowy 2.0. The cable will provide communications from Snowy Hydro's Tumut 3 Power Station to the main access tunnel (MAT) at Lobs Hole.

The MAT portal itself is finished and this is where the first of three tunnel boring machines (TBMs) will be launched in a couple of months' time to excavate the 2.7km tunnel down to the power station cavern, hundreds of kilometres underground.

Work is now underway at the portal site preparing a special 'cradle' for the TBM, with local businesses such as Cooma Cranes subcontracted to our Snowy 2.0 principal contractor, Future Generation Joint Venture, to provide onsite services. A water treatment plant is also being constructed to treat water used by the TBM in operation and allow it to be recycled.

To deliver power to the TBMs, worker accommodation camps and other construction activities at Lobs Hole and Tantangara, an onsite electricity substation is being built. Two large, green transformers that convert the electricity to a lower voltage have been delivered, before being installed and commissioned. The transformers, weighing approximately 85 tonnes each, were transported through the mountains on trailers with prime movers at each end.

At Polo Flat, Cooma, construction of the Snowy 2.0 concrete segment factory is racing ahead. The factory site requires a lot of concrete - and that's before it starts actually producing any concrete segments to line the Snowy 2.0 tunnels! For example, more than 5,500 cubic metres of concrete are needed in the slab for the segment curing shed.

In total, there will be 20 concrete slabs laid as part of the factory construction works. About 11 slabs have been completed. Local business Cooma Sand and Concrete has been contracted by Future Generation Joint Venture to provide these services, while Tumut-based Indigenous construction company Maliyan Horizon has been working with earthworks sub-contractor Civilex at the site.

In addition to the many concrete pours, the steel frames for the segment shed are being erected and site earthworks and an access road upgrade are continuing.

The segment factory is expected to start operations before the end of this year and will manufacture about 130,500 concrete segments to line Snowy 2.0 waterway and access tunnels.



## Fast facts

- A 750-tonne crawler crane will be used to assemble the TBM's massive 11m-diameter cutterhead, the main drive and front shield.
- A 300-tonne crane was brought onsite to help build the 750-tonne crawler crane.

- The 300-tonne crane will also be used to install the TBM tailskin.

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## Tunnel boring machine arrives



The 137m TBM that will be used to bore the Snowy 2.0 main access tunnel has arrived at Port Kembla and the components are being transported to site. Shipping containers of equipment and large individual parts - up to 174 tonnes in weight - are being delivered, including some escorted, oversized loads. The TBM will then be reassembled onsite at Lobs Hole.

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## Interactive digital pop-up book





Snowy Hydro has launched a new digital pop-up book showcasing Snowy 2.0 and taking the pumped-hydro renewable energy project to a younger generation. Bringing to life the engineering and purpose of Snowy 2.0 in a fun and interactive way, the pop-up book is designed to engage and inform young people.

You can find it on the Snowy Hydro [website](#). Share the link with family and friends! The pop-up book is the first stage of Snowy's online Next Generation Education Hub, which is set to launch later this year. Keep an eye on the [education page](#) of the website for all the details.

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## Local business onboard with Snowy 2.0



National Cranes and Engineering is a Tumut-based business, owned and operated

by Yvette and Phil Owers. In addition to providing services to Snowy Hydro, National Cranes is contracted to Snowy 2.0 to provide crane and access equipment. Yvette and Phil have six children and all of them (with the exception of their four-year-old daughter!) have worked in the business.

## Jounama, small but powerful



The Jounama Small Hydro Power Station was built at Talbingo 10 years ago to capture the 'wasted energy' generated by up to 4,000 tonnes of water per second flowing over Jounama spillway.

The station has a generating capacity of 14 megawatts, but in an interconnected system like the Snowy Scheme, every megawatt is valuable at times of peak energy demand.

Earlier this year, during normal operation of Jounama Small Hydro Power Station, a vibration was identified that required the unit to be removed from service. Further



investigation determined that the vibration was coming from the turbine and it was clear this was not going to be an easy fix.

The process of removing the turbine from the Jounama power station is a complicated one. It has to come out of a hatch that is downstream of the silo and under normal conditions, this hatch is under water. The power station's tailbay water level must be lowered via pumps to allow for the hatch to be opened.

This process, however, is completely dependent on the Blowering Reservoir water level being lower than the tailbay level. The project team's ability to remove and then reinstall the turbine is literally a race against time, with the natural inflows into Blowering and limited releases from the lake due to the irrigation off-season meaning water levels could rise.

Fortunately, the turbine was successfully installed, reflooded and a final leak test took place to ensure it was secure. To complete the job, a 300-tonne mobile crane was required to remove the draft tube gate, which on this unit is located out in the middle of the tailbay.

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## Snow depths measuring





Every week during winter for more than 65 years, snow depths have been measured in the Snowy Mountains. Measuring the snowpack and its water content - the 'fuel' of the Snowy Scheme - is an important job for Snowy Hydro's team of hydrographers.

Snowy uses the data gained for operational purposes, to help understand what sort of inflows we are likely to receive into our dams during winter and spring. Snow depth information is also made available to the public on the [snow depths page](#) of our website.

Snowy Hydro is a leading authority on measuring snow depths and alpine hydrology. Snow samples are collected in calibrated hollow metal tubes and these are weighed to determine the water content.

The measurements are taken from a number of points at snow courses within Kosciuszko National Park - the three primary snow courses are Spencers Creek (halfway between Perisher and Charlotte Pass), Three Mile Dam (near Mt Selwyn) and Deep Creek (between Cabramurra and Khancoban).

It is interesting to note that big snowfalls over winter might make skiers happy, but they don't always equate to big inflows into Snowy Hydro storages - it's the water volume within the snow that really matters.

Snow melt provides about two-thirds of inflows into Snowy Hydro's 16 dams and this water is used to generate hydropower and for irrigation and environmental releases.

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## Red Energy Ambassador Maddy Proud



***In our Q&A with Maddy Proud, a member of the 2019 netball championship-winning Sydney Swifts, find out about the book she wrote and what she thinks about the mighty Snowy Scheme!***

**What has been your 'Proudest' moment in netball?**

There have been a lot of proud moments for me throughout my career. Captaining the Australian 21-and-under team at the World Youth Cup in Glasgow in 2013 and being able to wave the Australian flag at the opening ceremony was incredible. Also, winning the Grand Final with the NSW Swifts in 2019 was something I'll never forget.

**What are your future goals for the remainder of your playing career?**

I would love to win another premiership (or two, or three, or four) with the Swifts and hope to one day be able to represent my country with the Diamonds.

**What have been the highlights as a Red Energy Ambassador?**

I loved our trip to the Snowy Mountains to learn all about the Snowy Scheme, meet incredible people and see some amazing things. To learn about the history of Snowy Hydro and be able to visit some iconic locations was an experience I will never forget – I'm so grateful to Red Energy for giving me this opportunity!

**Impressions of the Snowy Scheme? (when you visited in 2019)**

I was in awe from the moment we got there. I never fully understood how big it all was and what must have gone into building such an incredible thing. To learn all about how it works and what it does for our country was an unforgettable experience.

**Could you tell a turbine from a penstock?**

Ummm, next question?

**What's a fun fact about you that we may not know?**

When I was younger (from about age 5-7) I was a HUGE tomboy. I used to get confused for a boy when I walked down the street with my brothers (you can refer to a few old Instagram posts for proof). This was mainly because I loved sport so much and was always playing with my brothers and their friends in the backyard – I just wanted to be like them!

**Can you tell us about the children's book you wrote, *Grace on the Court*?**

*Grace on the Court* is about a girl called Grace Parker as she starts her first year of high school, aged 13. It follows her first high school netball season as she tries to navigate the 3 B's: boys, boy bands and ball sports. I wrote it because I didn't think there were enough books out there for young girls about sport – particularly netball. I think that if young girls can enjoy reading and playing sport, it will help them in their development throughout the teenage years. I've written a sequel to *Grace on the Court*, but am currently waiting for it to be published!

***Red Energy is 100% Australian-owned and operated. For more information about its great plans, go to [redenergy.com.au](https://redenergy.com.au) or call 131 806.***





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